COURSE CATALOG

2007-2008

Notice:

This catalog is intended to supply accurate information to the reader. From time to time, certain information may be changed.

The College may revise any matter described in this catalog at any time without publishing a revised edition of this catalog. Courses, programs, curricula and program requirements may be changed or discontinued at any time. Information that appears to apply to a particular student should be verified with the Office of Student Affairs at your local campus. Local campus information is found on page 8. The publication and its provisions are not in any way a contract between the student and Ivy Tech Community College.

Ivy Tech is an accredited, equal opportunity, affirmative action state college.

A copy of the most recent annual financial statement can be obtained upon request from the Office of the Treasurer.

Message from the President

Welcome to Ivy Tech Community College, the nation's largest single accredited statewide community college system. We have 23 campuses and over 105,000 students studying over 150 different programs throughout Indiana. You have made a wise choice in choosing to continue your education at Ivy Tech Community College. You will find faculty and staff dedicated to assisting you as you progress through your academic studies and complete your certificate or degree program. And whether you choose to enter the workforce after earning your degree/certificate or transfer your credits to another institution to pursue a bachelor's degree, Ivy Tech Community College is committed to giving you the education you need to be competitive and successful.

Not only will your education change your life, but it will also benefit those around you. You will directly contribute to your communities by providing the skills and knowledge needed in today's workplace. Community colleges are growing across the country because they provide education where it is needed the most — in communities that they serve. Ivy Tech Community College stands by its commitment to change the lives of its students and in turn change the state of Indiana. We are proud to have you as an Ivy Tech Community College student.

Sincerely,

Tom Snyder, President
Ivy Tech Community College
president@ivytech.edu

IVY TECH
COMMUNITY
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GENERAL INFORMATION

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How to Use this Catalog

THIS CATALOG IS EASY TO USE
Just take a minute to flip through it. You'll see right away that it isn't too hard to find what you're looking for. When in doubt, use the table of contents in the front or the index in the back.

IT HAS FIVE SECTIONS

General Information and College Services – This section has basic information about the College and its campuses. It includes College history, campus addresses, and other important information such as financial aid, student rights, grading systems, and so on. Get to know this section well.

Degree Programs and Requirements – Use this section to find out which classes to take to earn the degree or certificate you want. It's organized by "program" (such as business administration or manufacturing and industrial technology), and then by "concentration" (such as marketing or welding). You also use this section to find out what degrees are offered in a certain field and how many course credits you need to complete them. It also tells how many credits you'll earn for each course.

Course Descriptions – After you look up the classes you need in section 2, you'll probably want to know what they're all about. Go to this easy-to-use section for that. Simply find the course number (see sample page at right) in the Program Descriptions section (Section 2) and then look it up in the Course Descriptions section (section 3). Everything in section 3 is in alphabetical order.

Program Availability – Ivy Tech offers many educational programs and degrees, but not all programs and degrees are offered at all 23 campuses. This section is designed to help you quickly find which programs are available at the Ivy Tech campus that interests you.

Faculty List and Accreditations – This section is simply a list of full-time faculty and their educational back-grounds. It also shows which organizations and agencies accredit Ivy Tech Community College, its campuses, and programs.

WATCH FOR SYMBOLS AND TERMS.
A degree or certificate program requires different types of courses. There are four terms that describe course types: "General Education," "Professional/Technical," "Concentration," and "Locally Determined." Most degrees or certificates require some courses of each type. Other terms you'll see are:

Elective– The term "elective" means you can choose the class you want from those offered on your campus. These are marked with a "*".

Capstone Course– This type of course includes a component that assesses certain skills that will be expected of you as a graduate in the workforce. The assessment typically involves a written assignment. These are marked with a "^".

Locally Determined – This means your campus decides which classes you must take to complete the degree. In cases where you see courses marked with the symbol "**", it means that one of two courses is required and your campus decides which. In other cases, your campus determines which courses are required to fulfill the degree, based primarily on needs of local business and industry.

Your academic advisor can tell you which classes are required.

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How to Use the Programs of Study Section

All of the pages in the Programs of Study section follow the same format. The page at the right (page 3) contains a typical page from this section. The table below gives the description of each of the keyed items on the sample page.

A This tells the name of the educational program.

B This describes the educational program.

C This tells you the types of careers you can have with a degree within this program.

D This tells the degrees available within the educational program.

E This tells you the concentrations that are available within this program.

F This is the type of degree.

G This tells how many credits you need to earn a degree.

H This describes the course types and how many credits hours in each you need to earn the degree.

I This is the course type symbol.

J This is the course number.

K This is the course name.

L This tells how many credits a course is worth.

COURSE TYPE KEY

*   Elective

^   Capstone Course

** Locally Determined

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Criminal Justice

Program Description
If you are looking for an opportunity for public service in a challenging job that involves personal responsibility, you may find success in the criminal justice field. Knowledge of sociology, psychology, government and law is helpful in preparing for this career.

Sample Careers
Corrections officer, law enforcement officer

Degrees Available
Associate of Science, Associate of Applied Science

Concentrations Offered
Corrections, Law Enforcement, Youth Services

Availability of concentrations and degrees varies by campus. Contact your local campus for more information. See page 8 for contact information.

Associate of Science
Articulated transfer through an Associate of Science in Criminal Justice is available with Indiana State University, Indiana University and IU-South Bend. To view these Associate of Science transfer degree programs and to see if they are available at your local Ivy Tech campus, students should go to *http://www.ivytech.edu/*.

Students are encouraged to review these options with their advisors, to consult the current catalog of the institution to which they wish to transfer, and to contact the institution to which they wish to transfer. Additional opportunities for course and program transfer may also be available at your local campus. Students should contact the transfer office of their local Ivy Tech for further information.

Associate of Applied Science
To earn this degree, you must have 61-62 credits in the following areas:

General Education Core	19
Professional/Technical Core	27
Concentration Courses	12
Locally Determined Courses	3-4

General Education (19 Credits)

COM 101	Fundamentals of Public Speaking	3
or		
COM 102	Introduction to Interpersonal Communication	
ENG 111	English Composition	
IVY 1XX	Life Skills Elective	
MAT 1XX	Mathematics Elective	3
POL 101	Introduction to American Government and Politics	3
PSY 101	Introduction to Psychology	3
or		
SOC 111	Introduction to Sociology	3
XXX XXX	Humanities Elective	
XXX XXX	Life/Physical Science Elective	3

Professional/Technical (27 credits)

CRJ 101	Introduction to Criminal Justice Systems	3
CRJ 103	Cultural Awareness	3
CRJ 105	Introduction to Criminology	3
CRJ 110	Introduction to Law Enforcement	3
CRJ 120	Introduction to Courts	3
CRJ 130	Introduction to Corrections	3
CRJ 201	Ethics in Criminal Justice	3
CRJ 240	Criminal Law and Procedure	3
CRJ 260	Criminal Justice Research	3

Associate of Applied Science – Concentrations

Choose One of the Following Concentrations

Corrections Concentration (15-16 credits)
Vigorous law enforcement and stringent sentencing rules have increased the number of people being held for trial or imprisoned for their crimes in the last decade. Corrections officers monitor people being detained for trial and those who have been imprisoned.

CRJ 230	Community-Based Corrections	3
CRJ 231	Special Issues in Corrections	3
CRJ 246	Legal Issues in Corrections	3
XXX XXX	Program Elective	3
	Locally Determined Courses:	
CRJ 280	Internship	4
or		
CRJ XXX	Criminal Justice elective	3

Law Enforcement Concentration (15-16 credits)
Law enforcement officials provide assistance, respond to emergency calls, investigate crime scenes, and testify in court. This concentration places emphasis on developing the skills needed to be a police officer, including law, community relations, procedural law and criminal investigations.

CRJ 113	Criminal Investigations	3
CRJ 210	Police and Community Relations	3
CRJ 220	Criminal Evidence	3
CRJ XXX	Program Elective	3
	Locally Determined Courses:	
CRJ 280	Internship	4
or		
CRJ XXX	Criminal Justice elective	3

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COLLEGE PROFILE

In just over 40 years, Ivy Tech Community College of Indiana — more popularly known as Ivy Tech — has grown from a mere idea to a thriving post-secondary institution.

In 1963, the Indiana General Assembly established Indiana Vocational Technical College as Indiana's first statewide vocational technical college and appropriated $50,000 for its development. Following the appointment of a state board of trustees, a president was named and the first training program was established in 1965. The General Assembly later authorized Ivy Tech's present structure of 14 regions to provide accessible technical educational opportunities to all Indiana citizens. Between 1966 and 1969, 13 of the 14 regions were chartered and their boards of trustees appointed. (Region 14 was approved in 2000.) Later, Ivy Tech was given authority to grant diplomas and certificates, including one-year technical certificates and two-year associate degrees, and to offer general education courses needed for its technical education programs. Ivy Tech's growth in its relatively short history has been impressive. Enrollment reached 102,000 in 2003-04. The College had only 3,233 students in the fall of 1969. Within the statewide Ivy Tech system, more than 4,200 full- and part-time faculty members teach in program areas offered in eight schools: Business, Liberal Arts and Sciences, Education, Applied Science and Engineering Technology, Public and Social Services, Health Sciences, Fine Arts and Design, and Technology.

The State Board of Trustees appointed Gerald I. Lamkin as the sixth president of Indiana Vocational Technical College in December 1982. In 1995, the Indiana General Assembly changed the name of the College to Ivy Tech Community College. In May 2005, the Governor of Indiana signed a bill making Ivy Tech Indiana's community college system. Ivy Tech is now providing students with more opportunities by expanding transferable technical and professional offerings and liberal arts programs. In keeping with the College's expanded mission, on July 1, 2005, Ivy Tech's official name changed to Ivy Tech Community College of Indiana.

COLLEGE MISSION

As a statewide, open-access, community college, Ivy Tech Community College provides residents of Indiana with professional, technical, transfer, and lifelong education for successful careers, personal development, and citizenship. Through its affordable, quality educational programs and services, the College strengthens Indiana's economy and enhances its cultural development.

COLLEGE GOALS

Ivy Tech Community College strives to accomplish its mission placing strategic emphasis on: Professional and technical education to prepare students with the knowledge, comprehension, and skills to achieve their goals, meet the needs of Indiana's employers, and be contributing members of the Indiana economy.

General education to develop students' understanding and appreciation of our society, of social, political, civic, and environmental responsibilities. These provide students with awareness and understanding of knowledge and facts, and abilities to make sound, ethical judgments, to pursue critical and reflective thinking, and to engage in creative applications.

Transfer education to enable students to acquire knowledge and skills in general, technical, and professional areas and apply them to a baccalaureate degree at a four-year institution.

Developmental education to prepare students with knowledge, skills, and competencies in language arts, mathematics, computing, and college life skills. Courses are designed to enable students to be successful in their postsecondary education studies as well as to function productively in society.

Student development and services for recreational, social, wellness, and personal interest activities, involvement in community activities, and leadership activities. These also include career and academic counseling, advising, job placement, transfer services, tutoring, and accommodating students with unique needs.

Continuing education for licensing renewal, re-certification requirements, and other employment-related interests or requirements. These opportunities may include courses for the General Equivalency Diploma, and courses, workshops, and seminars for personal interest, self-improvement, and enjoyment.

Workforce education and training in credit, noncredit, and contract credit courses, certifications, custom designed courses, and consultative and evaluative services offered to businesses and industries to enable the State's employers to be effective, productive, and competitive globally.

Community service that connects the resources of the College to the cultural, recreational, and civic aspects of our communities by making College resources available through volunteerism and community involvement.

Diversity that reflects the communities we serve and their diverse needs. Diversity is sought in the student body, faculty, staff, and services, and in providing accessible, inclusive, and caring learning environments.

Continuous improvement of all instruction and services offered to students, employers, and the community, including increasing compensation and numbers of full-time faculty, parttime faculty, and student support staff. Continuous improvement also encompasses seeking program accreditations, increasing graduation rates, upgrading libraries and instructional equipment, increasing use of technology in instructional and administrative activities, improving the condition and amount of space, and acquiring new types of space for student activities, continuing education, and community services.

IVY TECH FOUNDATION, INC.

Ivy Tech Foundation, Inc. is an Indiana nonprofit corporation established in 1969 to raise funds to serve the needs of Ivy Tech Community College and its students.

The primary areas of the foundation's service are:

- Scholarships and grants-in-aid that allow students to enter the college and complete their studies.
- Loans for students who need temporary assistance until other sources of financial assistance can be obtained.
- Equipment purchases to increase the level of instructional quality in laboratories and classrooms.
- Funding for faculty enhancement opportunities and awards for excellence.
- Seed money for innovative educational programs of exceptional merit.

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Ivy Tech Foundation, Inc. is exempt from federal income taxation under Section 501(c)(3) of the Internal Revenue Code. All gifts to the foundation qualify as charitable contributions for federal income tax purposes. In addition, these gifts qualify for a special Indiana state income tax credit.

COLLEGE CALENDAR
Ivy Tech is on a semester schedule. Fall and spring semesters are 16 weeks long. Summer terms are of varying lengths. Certain dates on the college calendar may vary by campus. Specific start and end dates for the fall and spring semesters are listed in the calendar in this publication; summer start and end dates can be obtained by calling one of the campuses listed on page 8.

NON-DISCRIMINATION AND EQUAL OPPORTUNITY POLICY
Ivy Tech Community College of Indiana provides open admission, degree credit programs, courses and community service offerings, and student support services for all persons regardless of race, color, creed, national origin, religion, gender, sexual orientation, physical or mental disability, age or veteran status. The College also provides opportunities to students on the same non-discriminatory opportunity basis. Persons who believe they may have been discriminated against should contact the campus affirmative action officer, Human Resources Administrator, or Dean of Student Affairs. Ivy Tech Community College of Indiana is an accredited, equal opportunity/affirmative action institution.

REGIONAL ACCREDITATION STATEMENT
Ivy Tech Community College is accredited by The Higher Learning Commission of the North Central Association of Colleges and Schools, 30 N. LaSalle Street, Chicago, IL 60602, (800) 621-7440.

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2007-2008 CALENDAR

Fall 2007

Classes begin	August 20, 2007
Labor Day Holiday*	September 3
Thanksgiving Holiday/Fall Break*	November 22-23
Classes end	December 15

Spring 2008

Classes begin	January 14, 2008
Martin Luther King, Jr. Holiday	January 21
Spring Break varies; check with your campus	
Classes end	May 10
Graduation varies; check with your campus	

Summer 2008

Classes begin varies; check with your campus	
Independence Day Holiday	July 4
Classes end varies; check with your campus	

2008-2009 CALENDAR

Fall 2008

Classes begin	August 25, 2008
Labor Day Holiday*	September 1
Thanksgiving Holiday/Fall Break*	November 27-28
Classes end	December 20

Spring 2009

Classes begin	January 12, 2009
Martin Luther King, Jr. Holiday	January 19
Spring Break varies; check with your campus	
Classes end	May 9
Graduation varies; check with your campus	

Summer 2009

Classes begin varies; check with your campus	
Independence Day Holiday	July 3
Classes end varies; check with your campus	

*Some regions/compuses may have additional vacation days; check with your campus for your specific calendar.

Campuses

Ivy Tech serves Indiana through a network of 23 campuses. In addition, courses are offered in communities and workplaces across the state.

ANDERSON (Region 6)
104 West 53rd Street
Anderson, IN 46013-1502
Phone: (765) 643-7133
1-800-644-4882

BLOOMINGTON (Region 14)
200 Daniels Way
Bloomington, IN 47404-9272
Phone: (812) 332-1559
1-866-447-0700

COLUMBUS (Region 10)
4475 Central Avenue
Columbus, IN 47203-1868
Phone: (812) 372-9925
1-800-922-4838

EAST CHICAGO (Region 1)
410 E. Columbus Drive
East Chicago, IN 46312-2714
Phone: (219) 392-3600
1-800-843-4882

ELKHART (Region 2)
2521 Industrial Parkway
Elkhart, IN 46516-5430
Phone: (574) 293-4657

EVANSVILLE (Region 12)
3501 First Avenue
Evansville, IN 47710-3398
Phone: (812) 426-2865

FORT WAYNE (Region 3)
3800 North Anthony Boulevard
Fort Wayne, IN 46805-1489
Phone: (260) 482-9171
1-800-859-4882

GARY (Region 1)
1440 East 35th Avenue
Gary, IN 46409-1499
Phone: (219) 981-1111
1-800-843-4882

INDIANAPOLIS (Region 8)
50 W. Fall Creek Parkway N. Dr.
Indianapolis, IN 46208-5752
Phone: (317) 921-4800
1-800-732-1470

KOKOMO (Region 5)
1815 East Morgan Street
Kokomo, IN 46901-1373
Phone: (765) 459-0561
1-800-459-0561

LAFAYETTE (Region 4)
3101 South Creasy Lane
P.O. Box 6299
Lafayette, IN 47903-6299
Phone: (765) 269-5000
1-800-669-4882

LAWRENCEBURG (Region 11)
500 Industrial Drive
Lawrenceburg, IN 47025-2971
Phone (812) 537-4010
1-800-715-1058

LOGANSPORT (Region 5)
2815 East Market Street
Logansport, IN 46947-2152
Phone: (574) 753-5101

MADISON (Region 11)
590 Ivy Tech Drive
Madison, IN 47250-1881
Phone: (812) 265-2580
1-800-403-2190

MARION (Region 6)
1015 East Third Street
Marion, IN 46953-9370
Phone: (765) 662-9843
1-800-554-1159

MICHIGAN CITY (Region 1)
3714 Franklin Street
Michigan City, IN 46360-7311
Phone: (219) 879-9137
1-800-843-4882

MUNCIE (Region 6)
4301 South Cowan Road
Muncie, IN 47302-9448
Phone: (765) 289-2291
1-800-589-8324

RICHMOND (Region 9)
2357 Chester Boulevard
Richmond, IN 47374-1298
Phone: (765) 966-2656
1-800-659-4562

SELLERSBURG (Region 13)
8204 Highway 311
Sellersburg, IN 47172-1897
Phone: (812) 246-3301
1-800-321-9021

SOUTH BEND (Region 2)
220 Dean Johnson Blvd.
South Bend, IN 46601-3415
Phone: (574) 289-7001
1-888-489-5463

TERRE HAUTE (Region 7)
7999 U.S. Highway 41 South
Terre Haute, IN 47802-4898
Phone: (812) 299-1121
1-800-377-4882

VALPARAISO (Region 1)
2401 Valley Drive
Valparaiso, IN 46383-2520
Phone: (219) 464-8514
1-800-843-4882

WARSAW (Region 2)
3755 Lake City Highway
Warsaw, IN 46580-3901
Phone: (574) 267-5428

CENTRAL OFFICES
50 W. Fall Creek Parkway N. Dr.
Indianapolis, IN 46208
Phone: (317) 921-4800
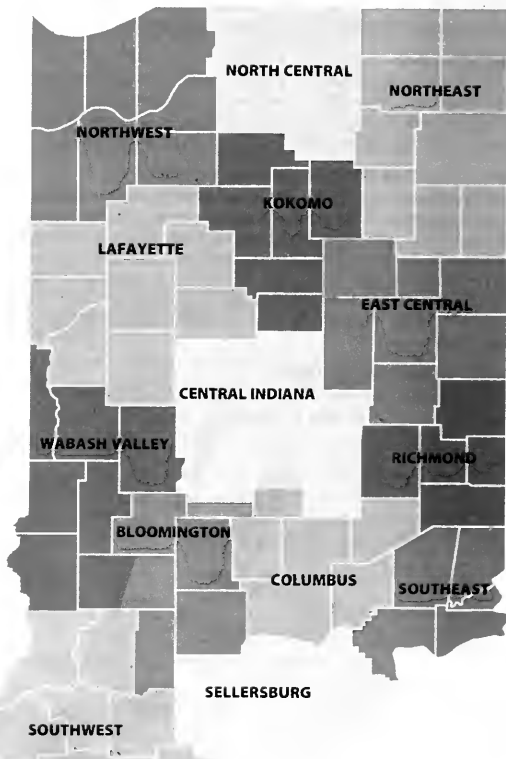
Toll-Free: 1-888-IVY-LINE
Web Site: www.ivytech.edu

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COLLEGE SERVICES

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Entering the College

ADMISSIONS FOR NON-DEGREE ENROLLMENT

Ivy Tech offers courses in many areas. Admission as a non-degree student can be achieved simply by filing a completed registration form in the Office of Student Affairs or online at www.ivytech.edu. High school students (age sixteen or greater) may take Ivy Tech courses with the written approval of the appropriate high school official. Non-degree students enrolling in general education courses or in courses with English or mathematics pre-requisites must take the ASSET or COMPASS course placement assessment. Non-degree students taking other courses may also be required to take the assessment. Non-degree students are not eligible to receive federal or state financial aid.

ADMISSIONS FOR DEGREE ENROLLMENT

Ivy Tech is an open admissions college, accessible to all Indiana citizens past high school age. Some degree-granting programs have limited availability and have additional requirements prior to acceptance to those programs.

For admission as a student to one of Ivy Tech's programs leading to an associate degree or technical certificate, the standard requirements are a high school diploma or General Education Development (GED) certificate and an application for admission. Prospective students who are college graduates with an associate degree or higher from a regionally accredited institution may submit their college transcripts in lieu of the high school diploma. Prospective students who have some college credit may submit their college transcript if the college transcript shows the high school graduation date. The Office of Student Affairs will assist the student on request in obtaining a high school or college transcript or GED scores. Transcripts brought in need to be sealed from the high school or other postsecondary.

Course Placement Assessment

All degree-seeking students must participate in the ASSET/COMPASS assessment. The purpose of these assessments is to measure the student's achievement in mathematics, reading, and writing, and to assist the student in the selection of appropriate courses. If the assessments reveal skill deficiencies, the student will be advised to complete appropriate developmental courses. Students may be eligible for financial aid during this period. When an assessment indicates that a student would be better served in an alternative educational setting, that individual may be referred to an appropriate community resource offering the needed assistance. The applicant may re-enter the admissions process at a later date, following completion of skills upgrading. Granting substitution of the ASSET/COMPASS assessment is the responsibility of the academic officer or designee. Substitutions will be granted to students who meet one or more of the following conditions:

- Possess an associate degree or higher from a regionally accredited college with math skills at the MAT 050 level or higher and writing skills at the ENG 025 level or higher. The number of years since an associate or higher degree was earned is not relevant.
- Have completed comparable academic skills advancement or general education courses in writing or math with a grade of "C" or better from a regionally accredited college within the last ten years. For purpose of substituting the reading portion, the prospective student must have completed a basic skills reading course or college-level general education course.
- Have comparable assessment scores (earned within the last two years) from a regionally

accredited institution that are deemed acceptable by an Ivy Tech campus for appropriate course placement.
- Have SAT/ACT scores earned within the last four years that are deemed acceptable by Ivy Tech for appropriate course placement into college-level courses. The College reserves the right to guide the enrollment of students in particular programs or courses on the basis of past academic records, academic counseling and assessment. Students seeking admission to certain health occupation programs may be requested to take part in specific pre-enrollment assessments and/or interviews to fulfill college or external agency requirements. Prerequisites may be required before enrolling in certain programs.

READMISSION FOLLOWING ENROLLMENT ABSENCE

Should a course of study at the College be interrupted more than two years, students must request readmission by contacting the Admissions Office. Information on eligibility for financial aid will be available to returning students.

LIMITED ADMISSIONS ENROLLMENT

Occasionally, the number of students admitted and enrolled in programs and/or courses may be limited by College resources or facilities—including available lab equipment and related support, or the number of available clinical work stations. The Office of Student Affairs should be contacted regarding programs which have limited access.

ADMISSION PROCEDURES AND SUPPORT DOCUMENTS—DEGREE OBJECTIVE

All prospective students pursuing an Associate of Arts, Associate of Fine Arts, Associate of Science, Associate of Applied Science, a Technical Certificate or a Certificate are required to:

1. submit an Application for Admission
2. provide one of the following:

   A. For high school graduates:

   (1) if they are high school graduates from public schools, home schools, private schools or high school correspondence schools, provide an official high school transcript consisting of courses and grades received, graduation date, and official signature and/or seal. If the prospective student cannot provide an official transcript because the high school no longer exists and/or records no longer available, the prospective student must provide written documentation to that effect. An Indiana certificate of completion is not the same as a high school diploma. If students have a certificate of completion, they are considered non high school graduates for purposes of admission requirements, or

   (2) if they possess an associate degree or higher, they may provide an official college transcript from a regionally accredited college indicating date of college graduation, or

   (3) if they are less than associate degree college graduates or college transfers, they may provide an official college transcript from a regionally accredited college indicating the high school from which the student graduated (transcripts from non-accredited colleges are unacceptable).

   B. For non high school graduates:

   (1) they may submit on official GED report of passing test scores from the American Council

on Education (ACE) or from a recognized state education body. If the prospective student cannot provide an official score report because records are no longer available, the prospective student must provide written documentation to that effect. High school equivalency exams provided by other organizations are not acceptable, or

(2) they may demonstrate the Ability to Benefit from postsecondary education by obtaining a passing grade on a test recognized for this purpose by the U. S. Department of Education. Students admitted to Ivy Tech under Ability to Benefit guidelines must provide an official GED report of passing test scores or a high school diploma within one calendar year of their initial date of declaration as a degree-seeking student. Students admitted under this provision who do not meet these requirements will be switched to courses-only status after a calendar year and are no longer eligible for federal, state, or institutional financial aid. A student can not graduate from Ivy Tech (technical certificate or associate degree) without proof of high school graduation or passing GED scores. Students who do not meet B(1) or B(2) should be referred to the appropriate College or community services (Adult Basic Education).

As part of the matriculation process, students may also be required to:

1. submit financial aid forms
2. comply with international student requirements
3. submit other necessary program-specific data
4. participate in initial course placement evaluation (ASSET/COMPASS)

Applicants desiring admission to some programs may be required to meet special enrollment requirements including, but not limited to, satisfactory high school grades, evidence of potential for success in the fi eld, and/or an enrollment interview. Once a program selection is made, certain prerequisites, including, but not limited to, health examinations, drug testing, and criminal background checks, may have to be met prior to enrollment in the particular program or course.

SECONDARY INITIATIVES
Dual Credit
Ivy Tech Community College of Indiana offers opportunities for high school juniors and seniors to enroll in dual credit programs that allow them to receive high school credit and advanced standing college credit at the same time. Each Ivy Tech campus has secured agreements with area high schools to offer dual credit in a variety of courses. Students should contact their school administration to learn what dual credit courses exist at their own high schools. Requirements to participate include admissions, readiness requirements for the course and course prerequisites. In order for a student to receive college credit, a grade of "B" or higher is required.

TRANSFERRING CREDIT TO THE COLLEGE
The College encourages students who have previously attended other accredited colleges and universities or adult education programs to forward transcripts to Ivy Tech prior to enrollment or re-enrollment for consideration of transfer of credit and/or advanced placement. Only courses with grades of C or higher are eligible for review for credit transfer. Students are responsible for providing pertinent course descriptions and/or copies of the college catalog(s) if further documentation is needed to facilitate the review. The College will assist individuals with evaluation of prior educational experiences.

ADMISSION PROCEDURES AND SUPPORT DOCUMENTS - INTERNATIONAL STUDENTS
International students must meet College admission standards and certain other requirements. International students should apply for admission to Ivy Tech at least 90 days prior to the beginning of the term they wish to attend. International students must provide a foreign transcript equivalency evaluation from an approved evaluator indicating that the student has attained the equivalent of a US high school graduation. The following are approved College evaluation agencies: World Education Services, Educational Credential Evaluators, Inc., and AACRAO – Foreign Educational Credential Service. The type of evaluation report required by Ivy Tech is the general report. Students whose first language is not English must also demonstrate English language proficiency. The Test of English as a Foreign Language (TOEFL) with a minimum score of 550 for the written exam or 213 for the computerized version is required and results must be sent directly from Educational Testing Services (ETS) to the College. Scores will be considered if they are less than two years old. A language proficiency test may be waived if an applicant is from an English-speaking country, has completed secondary school in the US with passing grades in non-ESOL English courses, or is a college transfer student who has completed standard freshman English, with a grade of C or higher, from a regionally accredited institution.

International students must provide proof of adequate financial support for College fees and living expenses for each year while attending Ivy Tech. International students should submit a letter from an appropriate sponsor, government official or bank official stating that sufficient funds are available to cover the cost of the student's education and that these funds will be available to the student while attending college in the United States. International students must purchase the College's insurance coverage for medical, accident and repatriation expenses, unless they obtain a waiver. Degree-seeking students must also participate in initial course placement evaluation.

STUDENT ORIENTATION
All new degree students are encouraged to participate in a student success seminar/orientation program prior to or during the first week of classes. Orientation is designed to assist students in making the transition to a college environment. Topics include registration procedures, career and employment services, financial aid, business office services, instructional programs, tutoring services, college activities, and policies and procedures.

ADVANCED PLACEMENT CREDIT AND CREDIT FOR PRIOR LEARNING
Credit by the College is granted for acceptable test results under the following programs:

College-Level Examination Program (CLEP), Advanced Placement (AP), DANTES, and tests given by Ivy Tech instructors as specific subject test-outs. Transfer credit is awarded for appropriate grades from courses taken at other regionally accredited institutions of higher learning.

Advanced standing is given to students who have met the requirements for regionally determined dual and articulated secondary and post-secondary courses.

Credit is also awarded for properly documented prior learning experiences and workforce certifications. Ivy Tech acknowledges the prior learning experiences of students by awarding credit for appropriate prior learning. Such prior experience could include but is not limited to the following: workplace learning, military experiences and training, nationally recognized testing, certifications, and community service. The awarding of credit for prior learning experiences is limited to

technical coursework. General education competencies must be validated through nationally recognized testing. If program accreditation or licensure issues in certain programs preclude the awarding of PLA credit, the College will not award PLA credit for coursework in that program. If you believe you have prior learning experiences that might help you earn credit in your degree program, please contact the PLA Coordinator at the campus in which you are enrolled.

The following time limits exist for the application of credit to Ivy Tech:

CLEP and DANTES – five years after date of test
AP – one year after high school graduation
Transfer credit – ten years after course was taken

Registration

REGISTERING FOR COURSES

The registration process includes financial aid and program advising, selection of courses and payment of fees. Newly admitted students will be notified when to register for their first classes. Specific days are set aside for registration before the beginning of each semester. Students should seek assistance in course selection from faculty advisors or advisors in the Office of Student Affairs before registering for classes. The Office of Student Affairs can supply information concerning registration.

Note: Students are registered when fees have been paid or payment arrangements have been made.

OPEN/LATE REGISTRATION

Open registration is held before the beginning of the term. Registration after the first day of classes each term is considered late. After the first week of classes a student may register only with the permission of the instructor (only for a 16-week semester). For further information contact the Office of Student Affairs.

COURSE DROP AND ADD

Students may drop a course with no record on the transcript, or may add a course in the first week of the regular (16-week) semester. Courses are not officially dropped until the necessary forms have been completed and returned to the Office of Student Affairs. After the first week of the regular semester, students must receive the permission of the instructor to add a course. All students who are not in a paid, arranged to pay or a "z" code status will be dropped from classes according to a set schedule. Once dropped, students may not attend class or be graded. If a student has not paid or is not current with the payment schedule by the last date for withdrawal, the student shall be withdrawn from the class, and the tuition balance is still due and payable.

STUDENT WITHDRAWAL

From the beginning of the second week to the end of the week marking the completion of 75 percent of the course, a student may withdraw from a course by filing a change of enrollment form at the Registrar's Office. Records of students withdrawing from courses indicate a "W" status rather than a grade when the withdrawal process is completed. Withdrawal is complete when the necessary forms have been submitted to the Office of the Registrar. A student who ceases to attend class after the last day to withdraw will receive a grade commensurate with course requirements.

Note: Withdrawing from class may affect or cancel financial assistance. Students receiving financial assistance should check with the Financial Aid office before withdrawal from a course or courses.

College Fees

The College seeks to provide quality education at the lowest possible cost. General fees are based on the number of credit hours for which the student has registered. Out-of-state students pay an additional fee per credit hour. Students or their families may be eligible for federal tuition tax credits in accordance with the Taxpayer Relief Act of 1997.

2007-2008 Fees

Tuition, per credit hour, in-state	$ 91.30
Tuition, per credit hour, out-of-state	$185.75
Tuition, per credit hour, Distance Learning courses, non-Indiana residents	$119.45
Technology student fee, per semester	$ 40.00
Distance Learning fee, per credit hour:	$ 10.00
International student fee, per semester	$ 75.00
Copy of transcript, after first free copy	$ 5.00

Fees are established by the State Board of Trustees and are subject to change.

Fees may be assessed for such items as consumable instructional supplies for certain classes.

Additionally, students may incur costs for textbooks, tools, uniforms, other equipment, deferral/payment plans, and special examinations.

ADDITIONAL EXPENSES

The following additional expenses may apply, depending upon the program of study:

Books: All students are expected to purchase the textbooks for their respective programs. The cost of books varies by class.

Tools: The College furnishes major equipment items for instruction. However, in many programs or courses, students must furnish additional hand tools and equipment. Uniforms and other special equipment: Several programs require students to furnish uniforms and special safety clothing.

Charges for consumable instructional materials: In some courses an additional charge for instructional materials may be required.

PAYMENT OF FEES

All enrolled students must make arrangements at the time of registration to pay all applicable fees. A student is officially registered and allowed to attend classes when all fees have been satisfied or arrangements for payment have been made.

REFUND POLICY

Students choosing to drop a course or courses must notify the College in writing using the change of enrollment form. Students choosing to withdraw from all courses may begin the withdrawal process in writing. The fee refund for voluntary withdrawal from a class, when applicable, will be processed only after the student files a change of enrollment form with the Registrar's Office.

The Student Information System processes student refunds using the percentages noted below. Refunds are calculated on business days regardless of holidays. Technology fees, consumable fees, and tuition are refunded at the same rate noted below. With regard to the technology fee, if the student withdraws from all of his/her classes during the 100 percent refund period, the technology fee will be refunded. If the student is enrolled in any classes beyond the 100 percent refund period, the technology fee will not be refunded. For purposes of the refund period, the "first day" is calculated differently for terms of 12 weeks or more and for terms of less than 12 weeks. For terms of 12 weeks or more, the refund period would begin on Monday of the first week of classes that a particular course meets. For terms of less than 12 weeks, the refund period would begin on the first day the course meets. For terms of less than 12 weeks, if a class begins on a Saturday or Sunday, the refund period would begin on the following Monday.

Term Length	Refund Schedule
16 week	1st-10th day 100%
12-15 week	1st-8th day 100%
10-11 week	1st-6th day 100%
8-9 week	1st-4th day 100%
4-7 week	1st-2nd day 100%
Less than 4 weeks	1st day 100%

Financial Aid

Ivy Tech participates in various types of federal and state financial aid programs that provide assistance to many students. Ivy Tech also provides financial assistance to students from its own resources. Students are encouraged to carefully explore all financial aid options at their campus.

Students must complete the Free Application for Federal Student Aid (FAFSA) to be considered for any form of financial aid. This form is available online at http://www.fafsa.ed.gov. Financial aid is available for both full- and part-time students regardless of age, race or sex. To qualify for financial aid all applicable requirements must be met. For federal and state financial aid programs students must:

- Be a regular student enrolled or accepted for enrollment in an eligible program;
- Not be enrolled in secondary school;
- Be a U.S. citizen or national or permanent resident;
- Maintain satisfactory academic progress in a course of study;
- Not owe a refund to a federal grant or loan program.

Students who have completed the FAFSA and submitted all required documentation will receive an award letter detailing the financial aid programs offered. Students will be notified of any additional documentation required for an award or instructions for receiving payment. Detailed information on all financial aid programs is available online at *www.ivytech.edu* or at your campus financial aid office

The following are financial aid programs:

Federal Pell Grants

Academic Competitiveness Grant
Federal Supplemental Education Opportunity Grants
Federal Work Study
Federal Stafford Loans
Federal Parent Loan for Undergraduate Students
Frank O'Bannon Awards
Child of Disabled Veteran Awards
Veteran's Benefits
Indiana National Guard Supplemental Grants
21st Century Scholar Awards
Ivy Tech Foundation Scholarships

For priority consideration for state assistance (SSACI), the FAFSA must be received by the Federal processor after January 1 but on or before March 10 preceding enrollment for the following fall semester. Otherwise, students may apply anytime during the school year. However, students are encouraged to apply at least 4 weeks prior to the enrollment for the term they wish to attend.

Application Procedures for Financial Aid

Students may apply on-line at *www.fafsa.ed.gov* or application forms are available in the Financial Aid Office at all Ivy Tech campuses. Because application procedures, deadlines, eligibility regulations and refund policies vary with different types of student aid programs, interested students are encouraged to contact the Financial Aid Office at their earliest opportunity. Students should allow two weeks for electronic applications or six to eight weeks for processing paper financial aid applications. Students are encouraged to apply for assistance at anytime. In general the fall semester marks the beginning of the financial aid award year.

Student Records

Ivy Tech maintains an educational record for each student who is or has been enrolled at Ivy Tech. In accordance with the Family Educational Rights and Privacy Act of 1974, as amended, the following student rights are covered by the act and afforded to all students at Ivy Tech:

1. The right to inspect and review information contained in the student's educational records.
2. The right to challenge the contents of the student's educational records.
3. The right to a hearing if the outcome of the challenge is unsatisfactory.
4. The right to submit an explanatory statement for inclusion in the educational record if the outcome of the hearing is unsatisfactory.
5. The right to prevent disclosure, with certain exceptions, of personally identifiable information.
6. The right to secure a copy of the institutional policy.
7. The right to file complaints with the Department of Education concerning alleged failures by Ivy Tech to comply with the provisions of the act. The name and address of the office that administers FERPA is:

Family Policy Compliance Office
U.S. Department of Education
400 Maryland Avenue, SW
Washington, DC 20202-4605

Each of these rights, with any limitations or exceptions, is explained in the Student Affairs Policy and Procedures Manual, a copy of which may be obtained in the Office of Student Affairs or the library.

At the College's discretion directory information may be provided in accordance with the provisions of the act without the written consent of the student unless the student requests in writing that such information not be disclosed (see below). The items listed below are designated as directory information and may be released for any purpose at the discretion of Ivy Tech unless a request for non-disclosure is on file.

1. Name, address, e-mail address, telephone number, dates of attendance, enrollment status
2. Previous institution(s) attended, major field of study, awards, honors, degree conferred.
3. Past and present participation in officially recognized activities, date and place of birth.

Students may request the withholding of directory information by notifying the Registrar's Office in writing, specifying the categories to be withheld, within ten (10) calendar days from the first scheduled day of the term. Ivy Tech will honor the request for one term only. Therefore the student must file the request on a term basis. The student should carefully consider the consequences of any decision to withhold any category of directory information. Regardless of the effect upon the student Ivy Tech assumes no liability for honoring a student's request that such information be withheld. Failure on the part of a student to request the withholding of specific categories of directory information indicates the student's approval of disclosure.

In addition, student records are held in security by the College. Transcripts on file with the College from high schools and other institutions of higher education cannot be released by Ivy Tech. A student needing a transcript from high school or another college should request it directly from that institution. The Registrar's Office will assist students wishing to see and review their academic records and student files. Any questions concerning the student's rights and responsibilities under the Family Educational Rights and Privacy Act should be referred to the Office of the Registrar.

DEPENDENCY PROVISION
Ivy Tech reserves the right, as allowed under the Federal Educational Rights and Privacy Act of 1974, to disclose educational records or components thereof without written consent to parents of dependent students as defined according to the Internal Revenue Code of 1954, Section 152 (as amended). A certified copy of the parent's most recent federal income tax form establishing the student's dependency status shall be required before any educational records or components thereof will be released to the parent of any student.

Academic Grading

The academic grading system has both grades and status codes, both of which are explained in greater detail later in this section. Grades reflect the quality of performance and level of compe-

tency achieved by students who complete a course. Formal grades are assigned at the end of each enrollment period. Instructors determine and assign grades and status based on objective appraisal and evaluation of the student's performance. Semester grade reports are available on the web and by phone.

In all courses the quality of the student's work determines the grade earned. For some courses quantity of work, speed of work, or both also are considered in determining the grade. Class participation also may be considered by instructors in awarding grades. In certain instances a status code appears on the student's record in place of a grade. Status represents a condition to which no letter grade can be assigned.

GRADES
The quality of student performance or competency level, as determined by the instructor at the completion of a course, is indicated by a letter grade of A, B, C, D or F. Ivy Tech does not use pluses and minuses as a part of its grading system. Each designation has a numerical value per credit hour, referred to as "quality points." The meaning and quality point value per credit hour of each letter grade are shown in the table below:

STATUS		QUALITY POINTS/CREDIT HOUR
A	Excellent	4
B	Good	3
C	Average	2
D	Below Average	1
F	Failure	0

Academic skills advancement courses are assigned grading designations, but no quality points or quality hours are earned.

STATUS CODES
Status codes describe the state or condition of a course on the student's record for which a grade has not been awarded. Status code indications carry no quality points. The types of status codes and the symbols used to indicate them are shown below:

STATUS	
I	Incomplete
AU	Audit
S	Satisfactory
U	Unsatisfactory
V	Verified Competency
W	Withdrawal

These status codes are used for the following reasons:

I—Incomplete
"I" designations are received by students who have actively pursued a course and are doing pass-

ing work at the end of the course but who have not completed the final examination and/or other specific course assignments.

To remove an "I" designation, a student must meet with the instructor and make arrangements to complete course requirements in a specified period not to exceed 30 days beyond the star of the following term. The instructor must submit the grade within 31 calendar days of the beginning of the following term in which the student received the "I" designation.

AU—Audit
"AU" status indicates enrollment in a course for which no grade or credit is awarded. The fees for audited courses are the same as those for courses taken for credit. Audit status must be declared no later than the end of the first week of classes with approval of the instructor or program chairperson.

W—Withdrawal
A "W" status code will be used for student and academic withdrawals. Student withdrawal (W) is a status referring to voluntary student withdrawal beginning at the start of the third week of the course for a 16-week semester up to the end of the week marking the completion of 75 percent of the course. To be considered officially withdrawn from a course the student must file change of enrollment form with the Office of the Registrar. After 75 percent of the term has elapsed a student may withdraw (with the same result as indicated above) only if documented extenuating circumstances are submitted to and approved by the Chief Academic Officer or his/her designee.

S—Satisfactory
The "S" indicates satisfactory completion of course work in situations where either a status of satisfactory or unsatisfactory (pass/fail) has been arranged by prior agreement. Requests for this type of grading must be declared at time of registration. Courses graded with an "S" do not count toward graduation requirements.

U—Unsatisfactory
The "U" indicates unsatisfactory completion of course work in situations where either a status of satisfactory or unsatisfactory (pass/fail) has been arranged by prior agreement. Requests for this type of grading must be declared at time of registration. The "U" differs from an "F" in that quality points are not computed.

V—Verified Competency
The "V" indicates satisfactory completion of course work in situations such as test-out, credit for prior learning experience or training, College Level Examination Program (CLEP), etc. Credit gained through this method may be used to satisfy degree requirements. This status is approved by the Chief Academic Officer upon recommendation of a faculty advisor following completion of necessary verification and documentation of competency.

CREDIT HOURS
Credit is described in semester hours (the number of credits taken per semester). The number of credits is determined by the demands of the course, course work and by the number of contact hours - the hours actually spent in the classroom or laboratory.

CREDIT HOURS/LOAD
A credit hour represents one hour of lecture, two hours of laboratory, three hours of clinical/practicum/studio, or five hours of internship instruction per week for the semester. A three-credit-hour lecture course, for example, meets 48 hours during a 16-week semester (3 hours/week x 16 weeks). An average full-time semester class load in most Ivy Tech programs consists of 12-15 credit hours. A class load of more than 17 credit hours requires approval of the Chief Academic Officer or designee.

ENROLLMENT STATUS
Enrollment status for the fall and spring semesters is determined by registered total semester credits:

Full-time student	12 or more credits per semester
3/4 time	9-11 credits per semester
1/2 time	6-8 credits per semester
Less than 1/2 time	1-5 credits per semester

A first-year student, by definition, is one who has completed 30 or fewer semester credit hours. A second-year student is one who has completed 31 or more semester credit hours.

For the summer period, enrollment status for Title IV financial aid and for all other purposes is as follows:

	FINANCIAL AID	ALL OTHER PURPOSES
Full-time	12 credits	6 credits
3/4 time	9-11 credits	4-5 credits
1/2 time	6-8 credits	3 credits
Less than 1/2 time	1-5 credits	1-2 credits

QUALITY POINTS
Quality points are numerical values indicating the quality of student performance in credit courses: A=4; B=3; C=2; D=1; F=0. The quality points earned for a course equal the quality point value times the number of credits. A student who earns an "A" in a four-credit course earns 16 quality points: the quality point value (4) x the number of credits (4) = the total quality points (16).

GRADE POINT AVERAGES
The grade point average (GPA) is a numerical indication of the student's performance in all courses in which quality points can be earned. The GPA is calculated by dividing the number of quality points earned by the number of credits earned. The term and cumulative GPA, calculated to three decimal places, will appear on the online grade report as well as on the transcript.

Under extenuating circumstances a student may petition the Chief Academic Officer to exclude coursework from the cumulative GPA calculation. Courses excluded from the cumulative GPA calculation as a result of a petition will not be counted as earned and cannot be used to satisfy pro-

gram requirements for degree-seeking students. Grades for excluded courses will remain in the student's term GPA, and the courses will continue to appear on the transcript, however the cumulative GPA will reflect the exclusion of the coursework. Contact the Office of Student Affairs for additional information.

IMPROVING A GRADE

Students may attempt to improve grades by repeating courses (allowable once per course). Financial aid recipients, however, should review their situations carefully since payment for repeated courses can be disallowed. Student transcripts will contain a complete record of all activity. The student's grade point average will reflect the highest grade earned.

DEAN'S LIST

The Dean's List, prepared and published each term, gives recognition to degree-seeking students who achieve a minimum 3.50 grade point average in non-academic skills advancement courses with no Ds or Fs while earning six or more Ivy Tech credits during the semester and have earned at least a total of 12 non-academic skills advancement credits during their course of study.

GRADE REPORTS

Grade reports are available on the web via Web for Students and by phone via STARS. A student may also request a copy of the academic transcript from the Office of the Registrar, which lists all coursework attempted at Ivy Tech.

PRIOR COURSEWORK

Credits taken more than ten years prior must be reviewed by the Dean of Academic Affairs to be applied to a degree or certificate objective. This policy applies to credits accepted in transfer from another institution and to credits taken at Ivy Tech prior to declaring the new degree or certificate objective to which the credits may apply.

ATTENDANCE

Regular attendance is expected at scheduled class meetings or other activities assigned as part of a course of instruction. Attendance records are kept by instructors. When personal circumstances make it impossible to attend scheduled classes and activities, the College expects students to confer with instructors in advance. Instructors can offer students the option of making up the material missed.

Absences may be considered by instructors in awarding grades and considering involuntary withdrawal. Students who must interrupt their Ivy Tech education to fulfill Reserve and National Guard annual tour requirements should present official military orders to their instructors prior to departure for duty. Students are not excused from completion of the course work and should make arrangements with their instructors to complete all work

Standards of Progress

Students who have declared a certificate or degree objective and who have 15 or more cumulative quality credit hours attempted must maintain a 2.00 minimum cumulative grade point average (GPA) to remain in satisfactory academic standing. Students receiving financial aid must

demonstrate satisfactory progress toward completion of a program within a specified time frame based on their enrollment status. Students also must successfully complete the minimum number of credit hours required for that status each semester. All students are expected to maintain a minimum of a 2.00 cumulative GPA to be eligible for graduation. Questions about standards of progress and academic standing should be addressed to the Office of Student Affairs.

SPECIAL PROBLEMS

The Office of Student Affairs is available to help with special problems, exceptional circumstances, and filing grievances (see Student Grievances). Special problems, exceptional circumstances, and grievances are ultimately the responsibility of the Chief Administrative Officer of the region, designated staff and committees.

Assessment

Assessment and evaluation at Ivy Tech lie at the heart of College teaching and learning as well as academic and student support systems. Assessment is a tool that supports the College mission to prepare individuals for employment and higher education. It is also a critical component of the College Plan for Institutional Improvement. A college-wide assessment and evaluation plan has been developed to measure student academic success. Because academic skills are one of the best measures of program success, the format of the plan reflects assessment and evaluation as students move through courses and programs.

The Assessment and Evaluation Plan is a reflection of the College's commitment to enhanced student learning from initial evaluation for course placement through outcomes assessment and subsequent institutional improvement that occurs as a result of these activities. The Assessment and Evaluation Plan follows students' experiences from entry-level placement through courses and degree or certificate programs. The plan also examines student-learning outcomes during course enrollments. In addition, it measures students' technical and general education skills near and/or after graduation.

Graduation

The Associate of Arts, Associate of Fine Arts, Associate of Science, Associate of Applied Science degrees, Technical Certificates and Certificates are awarded by the College to students who meet graduation requirements. Graduating students may be charged a fee to cover the cost of the ceremonial cap and gown. A student is considered eligible for graduation when requirements for graduation have been fulfilled. Each student entering the final semester prior to graduation must complete an application for graduation. The application will be certified by the student's program advisor and forwarded to the Registrar's Office where the appropriate diploma will be prepared. Graduating students will participate in outcomes assessments. To graduate with an Associate of Arts degree, an Associate of Fine Arts degree, an Associate of Science degree, an Associate of Applied Science degree, a Technical Certificate, or a Certificate, the student must:

1. Attain a minimum grade point average of 2.00 in the required technical and general education courses;

2. Completion of at least 15 degree credits in the curriculum as a regular student of Ivy Tech, and not through test-out or other means of advanced placement;
3. Successfully complete the required number of credits;
4. Satisfy all financial obligations due the College; and
5. Satisfy program accreditation standards that may have additional requirements.

Transferring to Another Institution

Ivy Tech has articulation agreements under which students may transfer individual courses or entire programs of study to a number of public and private institutions. A student, depending on his or her goals, may choose to transfer to another college or university and pursue a bachelor's degree after completion of a series of courses or completion of a two-year degree program at Ivy Tech. Some of these agreements are collegewide and some pertain to specific campuses of Ivy Tech.

The selection of an institution for transfer should be an individual decision based upon the extent to which credits will transfer, compatibility of degree programs, location, availability of programming, philosophy, and cost of attending the transfer school. Opportunities are available to Ivy Tech students to transfer and complete a baccalaureate program as a resident or commuting student. In addition opportunities are available to pursue a bachelor's degree using distance technologies which will allow a student to complete a degree program within the home community, even at an Ivy Tech campus.

Students are encouraged to review transfer options with their advisors, to consult the current catalog of the institution to which they wish to transfer, and to contact the institution to which they wish to transfer. Information about statewide program transfer is included with many programs in this catalog. Additional opportunities for course and program transfer with both public and independent colleges and universities are available. Students should contact the transfer office of their local Ivy Tech for further information.

TransferIN

Courses marked with "TransferIN" after the title are part of the Indiana Core Transfer Library. Indiana is working to help you transfer college credits more easily. To enable students to connect college credits, Indiana has developed the Core Transfer Library (CTL) — a list of courses that will transfer among all Indiana public college and university campuses, assuming adequate grades. Core Transfer Library courses will meet the general or free elective requirements of undergraduate degree programs and most CTL courses will also count towards degree program requirements, if an equivalent course is taught at your new campus. For more information about the Core Transfer Library, and for the most up-to-date course list, go to *www.transferIN.net*.

Student Support Services

ACADEMIC SKILLS ADVANCEMENT PROGRAM SERVICES
To ensure that every student has the opportunity to be successful, Ivy Tech offers an Academic Skills Advancement program. This developmental program is designed for students enrolled in programs or courses at the College who are encountering academic difficulty or who have been identified as having encountered academic difficulty in the past. Services provided through the Academic Skills Advancement program include diagnostic testing and assessment, course placement services and instruction.

The need for these services may be identified at the time of admission. However, a student may use any or all services upon encountering academic difficulty during a course of study. Academic skills advancement instructors and laboratory technicians provide developmental instruction in the areas of math, communications, sciences, writing and study skills. Some campuses offer GED preparation and English to speakers of other languages (ESOL). Delivery of instruction may be in the form of an academic skills advancement course in a classroom setting, one-on-one tutorial assistance, computer-based instruction or a self-paced study in the academic skills center. For further information about the College's Academic Skills Advancement program contact the Office of Student Affairs or the academic skills center.

ACADEMIC ADVISING
Academic Advisors are committed to engaging students in intentional, collaborative, supportive, and meaningful partnerships. Grounded in teaching and learning, Academic Advisors will assist students in achieving their personal, educational, cultural, and career goals while becoming self-directed, life-long learners.

Academic advising begins with orientation and continues through a series of meetings each semester during the student's first year. Students are assigned to an academic advisor depending on the student's area of interest and the advisor's area of expertise. Academic advising means that students must meet with their academic advisor or faculty advisor before registering for classes.

Academic advising will help students to:
1. Successfully access and navigate higher education.
2. Clarify life and career goals.
3. Develop goal-oriented educational plans.
4. Interpret academic requirements and select appropriate courses.
5. Access available internal and external resources that enhance their education.
6. Identify other experiences that will enhance their life, educational, and cultural goals.
7. Develop critical thinking, decision-making, and independent learning skills.
8. Evaluate their progress toward career and life goals, degree completion, and transfer.

CAREER SERVICES
Career Services provides many types of services to all students, graduates, and alumni, including: career exploration, resume writing preparation, career fair information and assistance in finding employment while in school and upon graduation. Students, graduates, and alumni interested in assistance with job search strategies may register with their local Career Services office. Upon registration, Career Services staff will:
1. Advise candidates of the College's career services.
2. Provide occupational information including employment trends and local and state occupational outlook data.
3. Assist the registered candidate in preparing a packet of credentials for use in finding a job.

This packet may include:

    a. A resume of the candidate's education and employment experience, and

    b. Personal letters of recommendation verifying the student's employability.

4. Create and maintain folders containing original copies of the candidate's credentials for all registered candidates.

5. Prepare copies of credentials used by the candidates for referral to prospective employers.

Alumni may update their credentials whenever they wish to use the Career Services Office.

Students or alumni registered with the Career Services Office will be informed of employment opportunities know to the Career Services Office. These opportunities are also posted on campus job boards and online. JobZone (*http://www.ivytech.edu*) is the Ivy Tech online resume referral system. Employers can post positions and students can post resumes at no cost. Local job postings as well as statewide listings can be accessed through JobZone. Employers who register with the Career Services Office are granted access to JobZone and are provided with the names of all qualified candidates without regard to gender, race, age, national origin or disability. Registered students or alumni are eligible for interviews with appropriate prospective employers. See the Career Services office for additional information or visit *www.ivytech.edu*.

COLLEGE BOOKSTORE

Each campus maintains a bookstore where students may buy textbooks and supplies.

LIBRARY

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Libraries at each campus provide access to materials, information and services that support students' educational needs. In addition libraries have career exploration materials, interlibrary loan services, general and technical periodicals, recreational reading, and audio-visual materials and equipment.

In addition to print materials the College provides a variety of online databases, many of which are full-text, that are available to students at all campuses.

DISABILITY SUPPORT SERVICES

Reasonable accommodations for persons with disabilities will be made to ensure access to academic programs, services, and employment in accordance with section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act of 1990. College programs and facilities are designed to be accessible to students with disabilities. Each campus has designated parking and special restroom facilities for persons with disabilities. Disability Support Services also will aid students with disabilities with career planning, financial aid and placement. The College staff works with the Department of Vocational Rehabilitation and other service agencies to assist students with disabilities through available local community resources.

It is the student's responsibility to contact the campus Disability Services representative to request accommodations; any information shared will be kept confidential unless the student authorizes release and exchange of specified information. Requests for accommodations and documentation of disability must be received one month prior to enrollment for the next academic term. Additional time may be required for some requests. Every effort will be made to provide reasonable accommodations in a timely manner.

Student Life

ORGANIZATIONS AND ACTIVITIES

The College recognizes the educational, recreational and social values of student organizations and extracurricular activities. Students are encouraged to participate in any or all phases of the student activities program as long as participation does not interfere with studies. All student organizations operate under the policies and guidelines set for the College by the State Board of Trustees. Approval by the Student Government and the administration is required of all student organizations seeking to make use of College facilities. All approved organizations must be open for membership to all eligible candidates and must make available to the Student Government records of officers, membership and financial transactions.

STUDENT GOVERNMENT ASSOCIATION (SGA)

Students in each region are provided opportunities to participate in student organizations through the Student Government Association (SGA). SGA is the representative governing body of the students. SGA representatives are elected or selected according to the by-laws of each regional SGA constitution and serve as stated in those bylaws. The student body membership may consist of representatives of each program area and an advisor as established in the by-laws.

SGA was established by students to encourage participation in SGA and to promote College spirit and recognition. SGA exercises the authority, unless otherwise delegated, to legislate on student matters subject to the approval of appropriate College administrative offices. The constitutions of all student organizations must be approved by a quorum of the SGA, consisting of a simple majority of the total membership and one staff advisor, or as otherwise stated in the by-laws.

The functions of SGA include:

1. Communication of bona fide concerns of the student body to appropriate College officials with suggestions for improvement.

2. Approval of student organizations beneficial to student life and worthy of being part of the College.

3. Assurance that copies of the constitution, by-laws and statement of purpose and objectives of each recognized student organization are on file in the Office of Student Affairs.

4. Referral of student grievances to the appropriate College officials.

5. Planning and conducting appropriate and socially responsible extracurricular student activities.

6. Submission of student activity budgets for review and approval by the regional administration.

PHI THETA KAPPA

Phi Theta Kappa is a national honor fraternity for two-year colleges. Its purpose is to recognize and promote academic excellence. This is done by providing leadership development opportunities for service in chapter activities on campus and in regional Phi Theta Kappa activities. Membership in Phi Theta Kappa is by invitation only and is based on a minimum grade point average as well as completion of a specified number of semester hours. Contact the Office of Student Affairs for further information.

INTRAMURAL SPORTS

College sports activities consist of intramural sports sponsored by the Student Government Association (SGA). Leagues can be formed when student interest justifies their organization. All College sports activities must be approved and sponsored by SGA and the administration.

CLUBS

Students wishing to organize hobby, social or special interest clubs should submit proposals to the Student Government Association (SGA), which will determine whether sufficient interest exists. SGA is authorized to charter clubs upon approval by the administration. Each club must have a president and vice-president, a full-time employee or regional administrative approved part-time position acting as advisor, and a constitution and by-laws.

SOCIAL ACTIVITIES

All group activities of the College must be approved and sponsored by the Student Government Association (SGA) and the administration. Classes, clubs and other groups should plan and conduct social activities for their members. SGA organizes and conducts social activities and gatherings in which all students are encouraged to participate, and to which many will be open to guests.

PROFESSIONAL ORGANIZATIONS

Student chapters of various professional organizations are formed in the same manner as other student organizations and are subject to the same requirements.

LEADERSHIP DEVELOPMENT

The College sponsors a Student Leadership Academy, a seven-month-long experience to help students better understand the roles of leaders and the leadership potential that exists in everyone. Students must apply to join the Leadership Academy. Contact the Office of Student Affairs for further information.

COMMUNITY SERVICE

Community service is an important aspect of becoming a well-rounded citizen. Community service occurs through classroom activities, student government, student clubs and organizations, and partnerships with community agencies. Please check with the student government office for volunteer opportunities.

IVY TECH ALUMNI ASSOCIATION

Many of the regions have established chapters of the Ivy Tech Alumni Association. Membership in the association is open to current and former students. Contact the Office of Student Affairs for further information.

E-MAIL

Each student has an Ivy Tech e-mail address via the Campus Connect college portal. Since departments and instructors will be communicating with you via your college e-mail account, it is important that you can access the account without difficulty. Students who do not use their Ivy Tech e-mail accounts may miss information from the College that is vital to their success. Official College notices and helpful information will be provided to you through your Ivy Tech e-mail. Ivy Tech will use your Ivy Tech e-mail account to notify you of changes in your accounts, in your courses, and in college policies and procedures. You are responsible for the information and notices that are sent to you via your assigned e-mail account. It is suggested that you set your web browser to Campus Connect and check your account every day. The Student Computing Practices are included on the site.

CAMPUS CONNECT: THE COLLEGE PORTAL WEBSITE

Campus Connect is available at http://cc.ivytech.edu. All Ivy Tech students are given an account to this intranet which provides information, communication tools, and access to online College services. Students may register for and drop/add courses as well as view grades, holds, transcripts, financial aid, and other College information. Along with targeted College announcements, students access their web-based, e-mail accounts via the portal. On the Courses tab, users can access course materials, including Internet courses, by clicking the eLearning logo.

Group webpages within Campus Connect are available for any sanctioned group on campus. Group webpages are either public (open to anyone) or private (selective admission) and are maintained by a group leader. Group Leaders may delegate portions of the site's maintenance responsibilities to other group members.

For more information, visit the Campus Connect website.

Housing

Ivy Tech is a commuter college and does not operate residence halls. However, the Office of Student Affairs may be able to respond to questions concerning housing in the community. Ivy Tech accepts no responsibility for locating, approving or supervising local student housing.

Student Parking

As part of registration, some campuses require students to register their motor vehicles and obtain a parking sticker. A special permit is required to park in spaces for persons with disabilities. Stickers are to be displayed in the vehicle while parked on campus, and students may park only in designated student parking areas. Vehicles improperly parked in areas reserved for the disabled, visitors or others may be towed at the expense of their owners.

Student Accident Insurance

For students registered in credit courses, the College provides accident insurance in a designated amount for injuries sustained while participating in College-sponsored activities. The activity must take place on College premises or on any premises designated by the College. Students are also covered while traveling to and from College-sponsored activities as a member of a group under College supervision. It is the student's responsibility to report injuries promptly to the instructor or to the Office of Student Affairs. The insurance is for a specified minimum amount of coverage. It is not intended to replace insurance coverage students may already have. Students should review their own coverage. The master insurance policy issued to Ivy Tech is on file at the central administrative office. The description of the hazards insured, benefits and exclusions is controlled by the master policy. Students with questions may contact the regional Office of Student Affairs.

Student Health Insurance

The College has made arrangements for Ivy Tech students to obtain health insurance. Insurance coverage is purchased directly from the insurance company by the student. Application forms and brochures explaining coverage and rates are available through the Office of Student Affairs during registration periods. Coverages and rates are subject to change.

Accidents and Illnesses

If a student has an accident on College property the student should report the accident to campus security or the Office of Student Affairs. If a student suffers an accident or illness while attending classes the student should notify the instructor. The College will take the necessary steps to intervene in a medical emergency while the student is on campus. If paramedic services or hospitalization is required the student is financially responsible.

If a student is suffering from an illness that makes it impossible to attend classes the student should contact his/her instructors.

The College does not provide a health services center. The College supports the Drug Free Schools and Communities Act of 1989. Many community agencies are available to assist students seeking counseling or treatment. Please contact the Office of Student Affairs for a listing of community resources. The College conducts a biennial review of the effectiveness of its drug and alcohol abuse prevention programs. This review is available in the Office of Student Affairs.

Voter Registration

Students are strongly encouraged to exercise their right to vote. In order to vote in national, state or local elections one must be a registered voter at the person's current address. Students who need a voter registration form due to either not having previously registered or having moved can pick up a voter registration form at the Office of Student Affairs. Forms can also be downloaded from the Indiana Secretary of State's office at *http://www.in.gov/sos/forms/* index.html. Under the "Elections" section, select form VRG-7i. A Spanish-language version is also available.

Emergency Closings of Campuses

Severe weather conditions or other emergencies occasionally make it necessary to close a campus. Each campus has designated local radio stations to announce information on closings.

Student Rights and Responsibilities

STUDENT CONDUCT
The College is committed to academic integrity in all its practices. The faculty value intellectual integrity and a high standard of academic conduct. Activities that violate academic integrity undermine the quality and diminish the value of educational achievement.

The reputation of the College and the community depends in large part upon the behavior of its students. Students enrolled at the College are expected to conduct themselves in a mature, dignified and honorable manner. Students are entitled to a learning atmosphere free from discrimination, harassment, sexual harassment and intimidation. This applies to the conduct between faculty and staff to students, student to student, and students to faculty and staff.

Students are subject to College jurisdiction while enrolled at the College. The College reserves the right to take disciplinary action against any student whose conduct, in the opinion of College representatives, is not in the best interests of the student, other students, or the College. Students who are disciplined should expect to find their sanctions enforced at other Ivy Tech campuses.

All students are expected to abide by the following College rules of conduct.

"Student" as used refers to a student, a group of students, a prospective student or a group of prospective students.

COLLEGE RULES
1. Academic Integrity

    Faculty are responsible for maintaining the academic integrity of the institution. Academic integrity is expected of all students and faculty.

    Ivy Tech recognizes academic integrity as a fundamental principle of collegial life. The credibility of the College's educational programs rests upon the foundation of student learning and integrity. Students who misrepresent their academic work violate the rights of their fellow students and undermine the faculty's authority and their ability to assess learning. The College therefore views any act of academic dishonesty as a serious offense requiring disciplinary measures, including failure for the exam or specific course work, course failure, suspension, and expulsion from the College. In addition, an act of academic dishonesty may have unforeseen effects and lead to formal processes outside the College.

    Definitions: Violations of academic integrity include, but are not limited to, the following acts:

    Cheating: Unauthorized use of notes or study aids, or acquiring information from another student's papers, on an examination; or obtaining a copy of an examination or questions from an exam prior to taking the exam; or altering graded work with the intent to deceive by resubmitting it for re-evaluation; or altering or destroying grade records; or allowing another person to do one's work and then submitting as one's own name; or allowing another to take an examination in one's name; or submitting identical or similar papers for credit in more than one course without obtaining prior permission from the instructors of all the courses involved.

    Aiding Cheating or Other Acts of Academic Dishonesty: Providing material or information to another student with the knowledge that this material or information will be used to deceive faculty in an effort to acquire higher grades.

    Plagiarism: Presenting within one's own work the ideas, representations, or words of another person without customary and proper acknowledgment of that person's authorship is considered plagiarism. Students who are unsure of what constitutes plagiarism should con-

sult with their instructors. Claims of ignorance will not necessarily excuse the offense.

Data Misrepresentation: Fabricating data; deliberately presenting in an assignment data that were not gathered in accordance with assigned guidelines or are deliberately fabricated; or providing an inaccurate account of the method by which the data were gathered or generated.

Falsification of Academic Records or Documents: Falsification of academic records or documents includes but is not limited to altering any documents affecting academic records; forging signatures; or falsifying information of an official academic document such as a grade report, ID card, library card, or any other official College letter or communication will constitute academic dishonesty.

Unauthorized Access to Computerized Academic or Administrative Records or Systems: Unauthorized access to computerized academic or administrative records or systems means viewing or altering the College's computer records without authorization; copying or modifying the College's computer programs or systems without authorization; releasing or dispensing information gained through unauthorized access; or interfering with the use or availability of computer systems or information. Also, when college-sponsored activities are held at locations owned or managed by other institutions or organizations, the unauthorized use, viewing, copying, or altering of those institutions' computer records, systems, or program would similarly constitute a violation of academic integrity.

2. Assembly: College policy states that assembly in a manner that obstructs the free movement of others about the campus, inhibits the free and normal use of the College buildings and facilities, or prevents or obstructs the normal operation of the College is not permitted. Obstruction of the free flow of pedestrian or vehicular traffic on College premises or at College-sponsored or supervised activities is included in the definition of obstruction.

3. Children on Campus: Due to insurance and security purposes, children are not allowed to be on Ivy Tech property without direct supervision by parent or guardian, with the exception of childcare centers. Children are not allowed in classrooms unless through the expressed consent of the instructor.

4. Commitment of College Funding: Committing College funding, including student clubs or organizations, without written approval and paperwork will result in the student being responsible for the money owed, the student being removed from the club or organization, and disciplinary action being evoked. No student shall enter into a contract with an outside agency using the name of the College. Contracts entered into in violation of this rule shall be the personal responsibility of the student.

5. Compliance and Identification: Students who fail to comply with direction of College officials or law enforcement officers in the performance of their duties and/or fail to identify themselves to these persons when requested to do so are subject to disciplinary sanctions.

6. Discrimination Activities: Any student involved in discrimination activities towards students or staff will face disciplinary action.

7. Disruptive Behavior: Behaviors or actions that disrupt the College's processes (academic and/or non-academic) are in violation of College rules. No student shall behave in a manner that is unacceptable in a learning environment or that endangers or infringes on the rights and/or safety of himself or herself or other students, visitors, staff, patients in a clinical situation, and/or children in childcare centers at Ivy Tech. If misconduct warrants an immediate suspension from the institutional setting for the remainder of the instructional period the instructor may do so without a prior hearing. If the student does not voluntarily leave the institutional setting campus official(s) and/or campus security officers may remove the student from that setting upon oral request by the instructor.

8. Electronic Equipment or Programs: Use of electronic equipment or programs in a manner that is disruptive to other students, staff, or College processes is prohibited. This includes electronic equipment being played loudly. Students introducing computer viruses will be subject to disciplinary action, including dismissal.

9. Financial Responsibility: Students are expected to pay all fees, fines, or loans in a timely manner. Official transcripts and copies of records will not be given to the student and degrees will not be awarded until debts to the College are paid. Students will be allowed to inspect and view transcripts and records. Students will not be allowed to register in an "owe fees" status.

10. Fundraising or Solicitation: College policy requires that individuals or organizations seeking the use of campus facilities or scheduling activities to solicit funds must first obtain written approval from the appropriate College official. College rules and regulations govern fundraising activities, the money collected, and the use of the money collected by the fundraising activities. Misrepresentation or misuse will result in the student's being responsible for the money owed to an institution or individual, the student's being removed from the club or organization, and the student's facing disciplinary action. The student is also accountable to state and federal laws and regulations.

11. Furnishing False Information With Intent to Deceive: Providing false information is against College rules and state laws.

12. Harassment/Sexual Harassment/Stalking and/or Intimidation: This is defined as conduct causing alarm or creating a risk by threatening to commit crimes against persons or their property or making unwelcome sexual advances or requests for sexual favors. This also covers harassment or intimidation of persons involved in a disciplinary hearing and of persons in authority who are in the process of discharging their responsibilities. Harassment, stalking, and/or intimidation are not permitted. Perpetrators are also subject to Indiana state law. Please see the policy regarding harassment at the end of this section.

13. Hazing: Hazing, an initiation process usually into a club or organization which often involves humiliating or otherwise harmful tasks, performances, or behaviors is not permitted.

14. Inappropriate Use of College Computer Resources: Theft or other abuse of computer time is against College rules, which include but are not limited to:
    a) unauthorized entry into a file, to use, read, or change the contents or for any other purpose.

b) unauthorized transfer of a file, unauthorized use of another user's identification and password or use of computing facilities to interfere with the work of another student, faculty member or college official.

c) use of computing facilities to send, receive, or view obscene or abusive messages.

d) use of computing facilities to interfere with normal operation of the College computing system.

e) use of computing facilities for students' personal benefit.

f) use of College-owned computer resources to prepare or print work for commercial purposes.

g) Inappropriate use of printers:

1. Printers are intended for class-related activities. Printing Internet web pages or other information not directly related to an authorized use is prohibited.

2. Excessive printing is prohibited. Students must follow lab guidelines limiting the number of copies or pages that may be printed.

3. Using non-approved paper in a college-owned printer is prohibited.

15. Motor Vehicles: Students are expected to comply with parking regulations. Parking spaces for persons with disabilities and visitors' areas are reserved for those purposes, and vehicles improperly parked in those areas may be ticketed or towed at the owner's expense.

16. Safety: No student shall engage in behavior that violates the safety rules of any institutional setting or other College premises, and/or College sponsored events whether such procedures are written or oral rules or directions. This shall include, but not be limited to, the wearing of any required personal protective equipment and the prescribed methods and procedures for handling and disposing of certain materials that may be hazardous, unstable, infectious, etc.

17. Signs or Surveys: Students may erect signs, conduct surveys, or display signs or posters on designated bulletin boards.

18. Use of College Name: The College name and logo are registered trademarks. The use of the College name or logo must be authorized by the officials in charge of College trademarks. Use without authorization is against College rules.

19. Use of College Facilities: Students are permitted on campus during normal published Ivy Tech hours and at other times established in the College calendar. Students wishing to utilize College facilities at other times must request permission from the appropriate College official. Unauthorized possession, duplication, or use of keys or electronic locking devices to any College premise, or unauthorized entry to or use of College premises is against College rules.

20. Compliance with Indiana State Laws: Violation of these laws is also against College rules and violators may also be prosecuted according to Indiana law.

  • Alcoholic beverages: Consuming, being under the influence of or possessing intoxicating beverages on College property is not permitted.

  • Arms/deadly weapons/explosives/chemicals: Possession of firearms (except those pos-

sessed by police or campus security officers) and other weapons, dangerous chemicals, or any explosive or explosive device is prohibited on College property or at any College sponsored activity held elsewhere. No student shall use or threaten to use firearms, other weapons, dangerous chemicals, or any explosive or explosive device on College property or at any College-sponsored activity held elsewhere. A harmless instrument designed to look like a firearm, explosive, or weapon that is used by a person to cause fear in or assault of another person is included within the meaning of a firearm, explosive or weapon.

  • Assault and battery, abusive actions, physical and/or verbal altercations and /or threatening language: Assault and battery, abusive actions, physical and/or verbal altercations, and/or threatening language are prohibited under College rules. Perpetrators are also subject to Indiana State law. No student shall threaten or commit a physical or sexual attack on faculty, staff or another student. No student shall force or threaten to force another student, faculty or staff member to have sexual contact against that person's will. Any student charged with an assault on Ivy Tech property or at any College-sponsored activity is subject to prosecution and will be disciplined under the campus code of student conduct.

  • Counterfeiting and altering: Copying or altering in any manner any record, document, or identification form used or maintained by the College is not permitted.

  • Dumping and littering: No student shall deposit, dump, litter or otherwise dispose of any refuse on college property except in duly designated refuse depositories.

  • Gambling: Gambling is not allowed except where permitted by state law or within a sanctioned program or class.

  • Illegal use of drugs: Being under the influence of, use of, possession of, or distributing illegal drugs is not permitted.

  • Smoking: All Ivy Tech buildings are classified as "non-smoking" facilities. Smoking is permitted only in designated areas.

  • Theft of property: Theft of personal property, College property, or property located on College property is a violation of College rules.

  • Vandalism: The destruction or mutilation of Ivy Tech books, magazines, equipment, resources or buildings is a violation of College rules.

REPEATED OFFENSES OF A LESS SERIOUS NATURE
Repeated offenses of a less serious nature are considered disruptive and will be handled under the College's disciplinary process.

POLICY AND COMPLAINT PROCEDURE AGAINST HARASSMENT
The College will not tolerate harassment based on gender (with or without sexual conduct), sexual orientation, race, color, religion, national origin, age, disability, and/or opposition to prohibited discrimination or participation in this or any other complaint procedure. This prohibition covers

harassment against any student at an Ivy Tech campus by anyone, including other students, employees or non-employees during any College activity or program. The policy prohibiting harassment includes adverse treatment of students because they report harassment or provide information related to such complaints.

Sexual harassment is simply one form of harassment covered by this policy. Sexual harassment encompasses unwelcome sexual advances, requests for sexual favors, and other verbal or physical conduct of a sexual nature where:

Submission to the conduct is an explicit or implicit term of student status (which includes academic and non-academic decisions).

Submission or rejection of the conduct is the basis for any decision affecting that individual's student status; or such conduct has the purpose or effect of unreasonably interfering with an individual's academic performance or creates an intimidating, hostile or offensive academic environment.

Sexual harassment would include, but not be limited to, actions such as:

(1) sex-oriented oral or written "kidding" or abuse, (2) photographs, drawings or graffiti of a sexual nature, (3) subtle pressure for sexual activity, (4) physical conduct such as patting, pinching, or constant brushing against another's body, and (5) explicit demands for sexual favors, whether or not accompanied by implied or overt promises of preferential treatment or threats concerning an individual's student status.

REPORTING AND COMPLAINT PROCEDURE
Students are encouraged to report harassment before it becomes severe or pervasive. A student who thinks that he or she has been a victim of harassment and who desires to file a complaint to that effect should report a complaint as follows:

If the complaint is regarding harassment by another student it may be filed with or reported to the Dean of Student Affairs or an academic chairperson with the expectation that the harassing behavior will be a violation of the College's Code of Student Conduct, either on its own terms or as a violation of another College policy.

If the complaint is regarding harassment by a College employee or non-employee it may be filed with or reported to the Dean of Student Affairs, any of the employee's supervisors, or with the Director of Human Resources or anyone else in a managerial role. All supervisors and members of management to whom a complaint of harassment is brought or who independently observe behavior prohibited by the harassment policy are to report the complaint of harassment or information about harassment promptly to the highest ranking official at the respective facility who is not the alleged harasser, to the Dean of Student Affairs or to the Director of Human Resources.

INVESTIGATION
Students filing complaints of harassment are assured that information about the allegation of harassment will be shared only with those who need to know about it. Records relating to harassment complaints will be kept confidential on the same basis. Complete confidentiality cannot be guaranteed since conducting an effective investigation would not be possible without revealing certain information to the alleged harasser and potential witnesses. Under no circum-

stances will the individual who conducts the investigation or who has any direct or indirect control over the investigation be subject to the supervisory authority of the alleged harasser.

DETERMINATION
After all of the evidence is in, interviews are final, and any credibility issues are resolved, a determination as to whether harassment occurred will be made and the parties informed of the determination. If no determination can be made because the evidence is inconclusive the parties will be informed of this result.

CORRECTIVE ACTION
After the determination is made the College will undertake prompt and appropriate corrective action including discipline up to and including termination of employment of an employee harasser or dismissal of a student harasser, whenever it determines that harassment has occurred in violation of this policy. Such corrective action will be reported to the student making the complaint.

VIOLATIONS
The College strives to provide an educational and professional environment that allows individuals to engage in their daily activities in a safe, healthy and secure manner. Local, state or federal law enforcement officials will be notified of anyone violating local, state or federal laws. Violators shall be subject to prosecution by the appropriate law enforcement officials.

Anyone found in violation of College regulations shall be subject to disciplinary action by the College through due process procedures for student conduct violations.

The regulations and procedures will be placed for reading and review in the library. Copies will also be available through the Office of Admissions or Student Affairs.

DISCIPLINARY ACTION
Cases of student misconduct and/or lack of academic integrity are to be referred to the chief academic officer or chief student affairs officer. A student who violates the rules and regulations of the College may be subject to disciplinary actions, which may include, but not be limited to, the following:

1. Verbal reprimand;
2. Restitution for damages;
3. Restriction of privileges such as access to lab facilities, library facilities, testing center, etc.;
4. Failure of the exam, quiz, project, etc.
5. Failure of the assignment or course;
6. Withdrawal from a course, program or the College for the remainder of the semester or term;
7. Suspension from the College (one calendar year);
8. Dismissal from the College (five years; student may appeal for reinstatement).

In addition, the College representative will be responsible to review all initial disciplinary procedures and may suspend a student for a period of time until the Student Status Committee can meet.

Students are provided an opportunity to appeal any disciplinary decision and are required to sign a waiver if they choose to waive the right to appeal. The basic process in discipline cases is as follows: notice of charges, notice of possible penalty, and opportunity to explain a defense to some authority.

1. An appropriate College official shall notify the student that he or she is accused of violating a regulation.

2. The student shall be notified in writing that he or she may elect one of three courses of action:

   A. The student may admit the alleged violation and agree with the recommended disciplinary action. A signed waiver which waives the right to appeal is required.

   B. The student may admit the alleged violation and request a hearing before the Student Status Committee.

   C. The student may deny the alleged violation, in which case the administrative officer shall refer him/her to the Student Status Committee.

The Student Status Committee hears all appeals relating to disciplinary actions.

STUDENT GRIEVANCE POLICY

The student grievance process provides the College an appropriate mechanism to deal with violations of student rules of conduct and conversely allows a student with a disagreement to grieve against a College employee's decision affecting that student. The College encourages students to resolve their complaints informally. The informal grievance procedures are designed to accomplish a quick resolution that is most expeditious and effective.

Whenever the informal process does not result in a satisfactory resolution, the College formal grievance procedure is also available.

INFORMAL GRIEVANCE PROCEDURE

The student shall initiate the informal process with the student working one-on-one with appropriate faculty or staff and must be started within 30 calendar days of the incident. Students must bring to the attention of their instructor (in cases involving academic coursework) or relevant supervisory staff member legitimate complaints perceived by them. The student should first bring the complaint to the attention of his/her instructor or the person with whom the student has a complaint. A conference with the student will be scheduled as soon as possible and within five working days (Monday - Friday) of notice of the student complaint, at the latest. The intent of these conferences is to ensure an early discussion of the issue, that the issue has been raised in a timely fashion and that if possible a mutually acceptable resolution can be reached.

A student who feels that the conference would be futile because of that person's involvement or the situation/concern cannot be resolved with the instructor or staff with whom the student has the complaint, he or she should bring the grievance in writing to the supervisor of that area or department. The conference will be held as soon as possible and at least within five working days of notice of the complaint. Such conferences are to be conducted in proper sequence of supervisors. If the grievance is not resolved with an instructor the student may elect to request a conference with a department head, division chair or the chief academic officer, as deemed appropriate. Non-instructional areas follow the same step process. Through Student Affairs, for example, the

process would be advisors/counselors, then manager, and finally the chief student affairs officer. Grievances may cover matters such as the application of College policies and practices to the grievant but the existence or content of the policies may not be grieved.

FORMAL GRIEVANCE PROCEDURE

If a student is not satisfied with the results of the informal process the student may proceed with the formal grievance as described below.

FORMAT OF THE WRITTEN GRIEVANCE

If the complaint is not resolved to the student's satisfaction through the informal procedure the student shall put the grievance to writing. The formal complaint must:

1. Clearly state the facts giving rise to the grievance.

2. Describe the efforts to informally resolve the complaint.

3. State the remedy sought by the grievant.

4. Be signed and dated.

TIMELY FILING OF A FORMAL GRIEVANCE

Students must file complaints within a reasonable period of time, not to exceed 30 calendar days, after the informal grievance process has been exhausted. Students must fi le a grievance within 30 days of the end of the term in which the incident occurred

FILING THE FORMAL GRIEVANCE

Original copies of the formal written grievance document shall be filed with both the regional office of Student Affairs and the College's Executive Director for Student Support Systems (50 W. Fall Creek Parkway N. Dr., Indianapolis, Indiana 46208). The Executive Director shall assign a College Grievance Coordinator who shall coordinate the handling of the grievance within the region.

MEDIATION

Reasonable efforts should be made by the Grievance Coordinator to mediate a mutually agreeable resolution of the matter with the parties. A signed document should be generated by the Grievance Coordinator stating the results of the mediation.

STUDENT STATUS COMMITTEE

The Student Status Committee is a committee whose purpose is to review all formal grievances referred to it and recommend a resolution to the chief administrative officer. It will be composed of six members, including two full-time instructional staff members and two administrative staff persons appointed by the chief administrative officer of the region. The additional two members will be students designated by the Student Government Association or the chief student affairs officer. The Committee's review of a formal appeal will begin no later than 30 days after fact-finding and mediation terminates. The Grievance Coordinator shall keep the grievance body informed of efforts related to fact-finding and mediation. Central Office support, as needed, will be available to the Grievance Coordinator.

DISPOSITION OF A FORMAL GRIEVANCE
BY THE STUDENT STATUS COMMITTEE

If mediation does not resolve the grievance the Student Status Committee shall, in all cases, conduct a hearing. Unless there is a mutual resolution of the grievance the grievance shall not be dismissed prior to the hearing. Written notice of the procedures, actions and meetings at all stages of the formal complaint procedure, including the role of advisors to each party, will be provided to both the student (grievant) and respondent.

The Student Status Committee will ensure the student due process. The student has the following rights:

1. Reasonable advance written notification of the time and place of the hearing;
2. Notification in writing of the charges with sufficient particularity to enable the student to prepare a defense;
3. Notification in writing of the names of the witness (es) directly responsible for reporting the alleged violation or, if there are no such witness (es), written notification of how the alleged violation was reported;
4. Notice of actions and meetings at all stages of this appeal procedure;
5. An opportunity to be heard;
6. An opportunity to question witnesses at hearings;
7. An opportunity to have a representative present when presenting facts, being questioned, or asking questions;
8. An expeditious hearing of the case;
9. An explanation of the decision rendered in the case.

The student shall not be required to testify against him or herself.

Once the formal grievance has been initiated and attempts by the Grievance Coordinator to mediate a settlement have been exhausted a hearing shall be held pursuant to the hearing guidelines entitled "Student Grievance Hearing Procedural Guidelines." These guidelines, which are occasionally updated, describe how the actual hearing will be conducted. The Grievance Coordinator will provide a copy to both the student (grievant) and respondent at the beginning of the formal process. Persons who desire to view the guidelines should contact the chief student affairs officer for a copy.

The Student Status Committee will issue a recommendation(s) to the chief administrative officer following its deliberation. Recommendations of the Student Status Committee if approved by the chief administrative officer are final, unless appealed to the Office of the President (see Appeal to the Office of the President). The student will be informed in writing of the chief administrative officer's decision. A copy of the letter with the chief administrative officer's decision will be filed in the student's permanent record.

APPEAL TO THE OFFICE OF THE PRESIDENT

If the student does not accept the decision of the Student Status Committee the student may appeal, in writing, within 30 calendar days from the written notification by sending a written notice to the General Counsel, Collegewide Appeals Grievance Body, at 50 W. Fall Creek Parkway N. Dr., Indianapolis, IN 46208.

An appeal of the decision of the Student Status Committee to the Collegewide Appeals Grievance Body is limited to procedural errors. The Collegewide Appeals Grievance Body does not review or re-hear the merits of the original grievance. The Collegewide Appeals Grievance Body can recommend to the President that the decision should stand or to remand it back to the campus chief administrative officer for reconsideration. The decision of the President is final.

REINSTATEMENT TO THE COLLEGE

If a student is dismissed from any campus/region of Ivy Tech, that individual is dismissed from the College. The year starts at the time/date of official notification to the student by the Chancellor/Executive Dean. After one calendar year the individual under suspension may apply for reinstatement. If the student is dismissed the student may appeal for reinstatement after five years. The individual must begin the reinstatement appeal process by informing the Dean of Student Affairs at the campus where the dismissal took place of his/her intentions. The appeal for reinstatement may be applied for at any campus/region of Ivy Tech where the individual hopes to attend. The appeal will be reviewed by the Dean of Academic Affairs and the Dean of Student Affairs. If there is reinstatement that is agreed to by the student, no further action is necessary. If the student is not satisfied with the reinstatement decision, the formal due process procedure is implemented. The campus/region Student Status Committee will act on the appeal within 30 days of its receipt. The recommendation of the Student Status Committee will be forwarded to the Chancellor/Executive Dean of the campus/region. That individual will render a judgment on the appeal. That judgment will be final.

STUDENT APPEAL OF A GRADE

When a student believes the final grade he or she received in a course is inaccurate, he or she should make an appointment with the instructor who issued the grade or status and explain the reasons for this belief. This process must be initiated within 30 calendar days of receiving the grade. The instructor and the student should make every effort to resolve the issue. It is expected that most if not all misunderstandings will be resolved at this level.

If the grade or status issue is not resolved the student can appeal in writing to the instructor's supervisor. This individual may be the department chairperson or program chairperson. Once the student has appealed the grade or status with the chairperson, if the issue is not resolved to the student's satisfaction the student may appeal to the department chairperson, next higher chairperson, or whomever is next in line.

The student's next recourse is to appeal to the regional chief academic officer. The student must notify the dean of academic affairs in writing of his or her intent to appeal the grade. An appeals committee will be formed by the academic dean, consisting of a faculty member from the program or from the division in which the program is housed, a faculty member from another division, the regional student affairs dean or designee, the regional academic affairs dean, and an optional fifth regional person, possibly staff. The appeals committee's decision will be forwarded to the student. Students not satisfied with the committee's decision may make a final appeal to the regional chancellor.

STUDENT RIGHT TO KNOW

The 1990 federal Student Right to Know Act requires colleges and universities to report to prospective and current students the persistence and graduation rates of full-time technical certificate and degree-seeking students. The graduation rate is based upon program completion within 150 percent of time usually required for a full-time student. For technical certificate students, this is the number of full-time students graduating in three semesters. For associate degree students, this is the number of students graduating in six semesters. Contact the Office of Student Affairs for further information.

Campus Security Information

JEANNE CLERY ACT (CAMPUS CRIME STATISTICS) INFORMATION

The Crime Awareness and Campus Security Act of 1990 (also known as the Jeanne Clery Act) requires colleges and universities to disclose an annual report highlighting crime statistics for the previous three years, safety awareness programming, student conduct information, and other information on campus crime and incidents. Ivy Tech Community College of Indiana is committed to provide safe and secure environment for the campus community. Please contact the Office of Student Affairs for a copy of the annual report.

CAMPUS SEX CRIME PREVENTION ACT

The federal Campus Sex Crimes Prevention Act requires state procedures to ensure that offender registration information is made available in a timely manner to law enforcement agencies with jurisdiction where institutions of higher education are located, and that it is entered into appropriate state records and data systems. Law enforcement agency information provided by the State concerning registered sex offenders may be found at the Indiana Criminal Justice Institute website located at *http://www.in.gov/cji/* or the Indiana Sheriff's Association website located at *http://www.indianasheriffs.org/default.asp*.

Accelerated Certified Training

Each Ivy Tech region offers specialized corporate services for business and industry through its office of Workforce and Economic Development (WED). Through WED, the College develops customized programs and services to meet the training needs of local business and industry. In addition to training courses delivered at the College or at a business site, WED can provide consulting services, assessment, job profiling and other business services that may be requested by the employer. The WED Departments work with business and industry, trade unions, and community economic development groups to deliver training and services rapidly and flexibly when and where it is needed.

In addition to providing instruction in multi-craft maintenance, computers, advanced manufacturing, welding and other such technical training needs, the College also provides programs in management, supervision, soft skills, and basic skills development. Courses may be delivered through a contractual arrangement with a single employer or a consortium of employers.

Through the continuing education operation of the WED Department, professional development courses are offered to individuals on the open enrollment schedule. Continuing education courses can help students meet their occupational continuing education or certification requirements and to enhance and upgrade their workplace skills. Each campus also offers courses in personal enrichment to the community; examples might include such courses as fitness and wellness, investing, or the arts.

WORKFORCE CERTIFICATION

Nearly all of the College's campuses provide Centers for Workforce Certification. Certification training and testing is provided in the areas of information technology, e.g., Novell, Microsoft and Cisco. They also offer training and testing in a wide variety of other discipline areas in health, business, public services and technology. The centers provide pre-assessment services, classroom and hands-on training, post-assessment and certification testing services in a onestop setting. Courses are offered both in semester length and short-term sessions and in credit and not-for-credit formats. Faculty have identified many certifications that equate to college credit courses through faculty evaluation; credit equivalencies for certifications appear on the "Certification Crosswalk" on the College website.

Ivy Tech has been and continues to be a leader in promoting Indiana's economic development by providing comprehensive training services to Indiana's businesses and industries. Detailed information about the programs, courses, and services provided is available through each campus' WED Department.

Instructional Programs

The College's degree programs are offered in eight schools:

School of Fine Arts and Design
School of Business
School of Liberal Arts and Sciences
School of Health Sciences
School of Public and Social Services
School of Technology
School of Applied Science and Engineering Technology
School of Education

The College offers the following degrees and certificates:

ASSOCIATE OF ARTS (AA) DEGREE PROGRAMS

The associate of arts degree program prepares students for transfer to four-year institutions. General education and liberal arts courses make up all or almost all of the curriculum, and students are required to take a minimum of eight credit hours in a foreign language. Concentrations are available in nine areas. The coursework provides students with a foundation for transfer to a related baccalaureate program at a four-year institution.

Students interested in the Associate of Arts program should contact their local Ivy Tech campus and institution to which they want to transfer for further information.

ASSOCIATE OF SCIENCE (AS) DEGREE PROGRAMS

The College offers two types of AS programs: AS programs in technical and professional areas and AS programs in the liberal arts.

AS degree programs in technical and professional areas prepare students for transfer to cooperating four-year institutions and for careers. Technical/professional AS programs typically contain 40 percent or more general education, with the balance in technical and profession courses. The coursework provides students with a foundation for transfer to a related baccalaureate program at a four-year institution, and equips students with skills for the job market. AS curricula in technical/professional areas are tailored to meet specific institutional transfer objectives.

The AS degree program in the liberal arts prepares students for transfer to four-year institutions. General education and liberal arts courses make up all or almost all of the curriculum.

Concentrations are available in eight areas. The coursework provides students with a foundation for transfer to a related baccalaureate program at a four-year institution.

Students interested in Associate of Science programs should contact their local Ivy Tech campus and institution to which they want to transfer for further information.

ASSOCIATE OF APPLIED SCIENCE (AAS) DEGREE PROGRAMS

Associate of applied science degree programs are two-year programs that prepare students for careers, career changes and career advancement. AAS programs may also prepare students for transfer to four-year institutions. These programs offer education in recognized technical areas and specialties with emphasis on analysis, synthesis and evaluation. The program content, which is approximately 30 percent general education, provides depth and breadth in conceptual and professional/technical skills. The general education courses equip students with the problem-solving, communications, scientific and mathematical skills to compete successfully in the job market. Professional/technical courses equip students with the skills to obtain employment and to advance in the workforce.

ASSOCIATE OF FINE ARTS (AFA) DEGREE PROGRAMS

The associate of fine arts degree program prepares students for transfer to cooperating four-year institutions and for becoming professionals in the field of art. General education coursework makes up approximately 40 percent of the curriculum, including six hours of art history. The balance of the curriculum includes arts foundation, studio art, graphic and design work, and elective coursework. The coursework provides students with a foundation for transfer to a related baccalaureate arts program at a four-year institution.

Students interested in the Associate of Fine Art degree should contact their local Ivy Tech campus for availability of programs and for further information.

TECHNICAL CERTIFICATE (TC) PROGRAMS

Technical Certificate programs provide education in conceptual and technical skills for specific occupations. Each program contains a sequence of required courses in a recognized specialty within one of the programs at the College. The program content is designed to develop competency in the comprehension of general and technical skills. Certificate programs require mastery of basic reading, writing, mathematical and algebraic skills.

CERTIFICATE PROGRAMS

Certificates are sequences of technical and professional courses. They provide access to targeted, short-term workforce training, and completers may sit for specific certification exams. Courses in certificate programs also apply toward technical certificates and associate degree programs in the subject area. Certificates have between 16 and 27 credit hours, with a consistent statewide curriculum, and are currently offered in business and technology fields.

DISTANCE LEARNING

Distance Education

At Ivy Tech, you can complete several degree programs online. Our online programs and courses make it even easier for you to take classes that fit your schedule, while still enjoying interaction with your classmates and learning from the same qualified instructors who teach class on campus. For more information about the College's online offerings, visit www.ivytech.edu/distance.

In addition, the Indiana Partnership for Statewide Education(IPSE) is a collaboration of Indiana's colleges and universities committed to delivering higher education courses via distance education to learners all over Indiana. Most IPSE courses are online, though some are delivered via two-way video or some other medium. Most courses offered through IPSE are transferable among all seven of Indiana's public colleges and universities as well as several of the private institutions. Contact your local campus for availability of courses or visit the Indiana College Network website at www.icn.org.

Apprenticeship Programs

Ivy Tech is a partner with Industrial and Building Trades Apprenticeship programs in Indiana to provide certificates and associate degree programs to Indiana companies and employees. The College and the local joint apprenticeship training committees (JATC) come together and offer educational programs. Individuals who have been selected by the JATC become Ivy Tech students and have an opportunity to earn college credit while advancing through a registered apprenticeship program. Because Ivy Tech has adopted the national standards of the Industrial and Building Trades apprenticeship programs, the apprentice has an opportunity to earn a Technical Certificate (TC), Associate of Applied Science (AAS), or Associate of Science (AS) degree. Students should contact the Apprenticeship Manager at the local Ivy Tech campus for more information.

Those apprentices or journeypersons who wish to explore transfer opportunities after earning an AAS or AS degree can contact Indiana State University, Indiana University-Labor Studies, the National Labor College, or Sullivan University. Interested apprentices and journeypersons should consult the current catalog of the institution in which they are interested, and should review their options with an academic advisor. Additional course and transfer prospects may also be available.

Senior Scholars

In the spring of 2001, Ivy Tech launched the Senior Scholars program. Indiana citizens 60 years of age and older can take credit courses at Ivy Tech tuition-free. Students are responsible for books

and any associated fees. In order to qualify for this program a person must meet the following requirements:

- Be an Indiana resident;
- Be 60 years of age or older at the start of a semester;
- Possess a high school diploma or GED;
- Be retired from their primary vocation (does not apply to homemakers); and
- Not be employed on a full-time basis.

Non-credit courses are not included in the Senior Scholars program. Please contact the Office of Admissions for further information.

College for Working Adults

When you're balancing a job, family and other commitments, a college degree might seem out of reach. As a working adult, you need a solution that fits your schedule, your career goals, and your budget. What you need is more than just a college — you need a college designed especially for you. Ivy Tech's College for Working Adults combines innovations in scheduling and instruction to ensure that you earn your associate degree in just two years while you continue to work. The program offers: a defined program plan, 8-week sessions, two classes per session, a set schedule, career-relevant courses, and the support you need along the way. Visit *www.ivytech.edu* for more information.

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PROGRAMS OF STUDY

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Ivy Tech Program Inventory

SCHOOL OF FINE ARTS AND DESIGN

Fine Arts	AFA	
Interior Design	AAS	**Concentrations:** Decorative Arts and Design Garden Design Interior Design
Visual Communications	AAS, AS, AFA	**Concentrations:** Film and Video Graphic Design Graphic Media Production Photography Web Design Web Development

SCHOOL OF BUSINESS

Accounting *Available online*	TC, AAS*, AS	
	Certificate	Bookkeeper Fundamental Payroll
Business Administration *Available online*	TC, AAS*, AS	**Concentrations:** Agri-business eBusiness Financial Services Health Care Administration Human Resources International Business Logistics Management Marketing Operations Quality Management Real Estate Restaurant Management
	Certificate	Human Resources Management
Computer Information Systems *Available online*	TC, AAS*, AS*	**Concentrations:** Database Management Programmer/Analyst Student Directed Studies Web Management

Computer Information Systems (continued)	**Certificate**	Database Java Programming Visual Programming Web Management
Computer Information Technology	TC, AAS	**Concentrations:** Computer Security Network PC Support and Administration Student Directed Studies Logistics Management AS
	Certificate	Network Administration PC Support and Administration Routing and Switching Systems Security
Office Administration *Available online*	TC, AAS*, AS	**Concentrations:** Administrative Legal Medical Software Applications
	Certificate	Microsoft Office Specialist
Transportation, Distribution and Logistics	AS	

SCHOOL OF LIBERAL ARTS AND SCIENCES

General Studies *Available online*	AS*	
Liberal Arts	AA, AS	**Concentrations:** English and Communication Foreign Language Humanities Life and Physical Sciences Mathematics Social and Behavioral Sciences
Professional Communication	AS	

SCHOOL OF HEALTH SCIENCES

Central Service Technician	TC	
Dental Assisting	TC	
Health Information Technology	AS	

Medical Assisting	TC, AAS	**Concentrations:** Administrative, Clinical, EKG, Generalist, Insurance, Medical Assistant, Pharmacy Technician, Phlebotomy, Therapeutic Massage, Transcription
Medical Laboratory Technology	AAS	
Nursing	AS	
Ophthalmic Technology	TC, AAS	
Paramedic Science	AAS, AS	
Physical Therapy Assisting	AS	
Practical Nursing	TC	
Radiation Therapy	AS	
Radiologic Technology	AS	
Respiratory Care	AS	
Surgical Technology	AAS, AS	
Therapeutic Massage	TC, AAS	

SCHOOL OF PUBLIC AND SOCIAL SERVICES

Community Emergency Preparedness and Management	AS	
Criminal Justice *Available online*	AAS, AS*	**Concentrations:** Corrections, Law Enforcement, Youth Services
Hospitality Administration	TC, AAS, AS	**Concentrations:** Baking and Pastry Arts, Culinary Arts, Event Management, Hotel Management, Restaurant Management

Human Services *Available online*	TC, AAS*, AS*	**Concentrations:** Correctional Rehabilitation Services, Generalist, Gerontology, Mental Health, Substance Abuse
Library Technical Assistant *Available online*	AS*	**Concentrations:** Children's Services, Library Technology
Mortuary Science	AAS	
Paralegal Studies *Available online*	AAS*, AS*	
Public Safety	TC, AAS	**Concentrations:** Environmental Health and Safety, Fire Science, Hazardous Materials, Public Administration

SCHOOL OF TECHNOLOGY

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Automotive Technology	TC, AAS, AS	**Concentrations:** Alternative Fuel Technician, Auto Body Repair, Auto Service, Automotive Service Management, Dealer Co-Op, High Performance, Motor Sports, Motor Sports Fabrication
	Certificate	Automotive Electrical/Electronics, Brakes and Suspension, Engine Performance, Power Train
Aviation Technology	AAS	**Concentrations:** Aircraft Maintenance Technician
Building Construction Management	AAS, AS	
Building Trades Apprenticeship	TC, AAS, AS	**Concentrations:** Boilermaker, Bricklayer, Carpenter, Cement Mason

Building Trades Apprenticeship (continued)		Electrical Lineman Electrician Elevator Constructor Floorlayer Heat/Frost Insulator/Asbestos Worker Ironworker Millwright Operating Engineer Painter Plasterer Plumber/Pipefitter Roofer Sheet Metal Worker Sprinkler Fitter Substation Mechanic Telecommunications Technician
Construction Technology	TC, AAS	**Concentrations:** Architectural Cabinetry Electrical HVAC Interior Planning and Design Landscape Technology Residential and Light Carpentry
	Certificate	Construction Technician
Design Technology *Available online*	TC, AAS*, AS Architecture	**Concentrations:** CAD-CAM Civil Computer Graphics Mechanical
Electronics and Computer Technology	AAS, AS	
Industrial Apprenticeship	TC, AAS	**Concentrations:** Electrician Facilities Maintenance Heating Ventilating/Air Conditioning Industrial Mechanic Machine Repair Mechanic-Gas/Electric Vehicles Millwright Mold/Die Maker

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Industrial Apprenticeship (continued)		Pattern Repairer Plumber/Pipefitter Sheet Metal Stationary Power Plant Toolmaker
Machine Tool Technology	AAS	
Manufacturing & Industrial Technology	TC, AAS, AS	**Concentrations:** CAD/CAM CIM CNC Facilities Maintenance HVAC Industrial Electrician Industrial Maintenance Machine Tool Maintenance Technician Mechanical Mechanical Maintenance Operations Plastics Process Control and Automation Quality Assurance Tool and Die Welding
	Certificate	Fluid Power Heating and Air Conditioning Industrial Electrician Machine Tool Structural Welding
Recreational Vehicle Repair Technology	TC, AAS	

SCHOOL OF APPLIED SCIENCE AND ENGINEERING TECHNOLOGY

Agriculture	AAS, AS	**Concentrations:** Crop Production Swine Production
Biotechnology	AAS, AS	
Chemical Technology	AAS	**Concentrations:** Chemical Lab Tech Forensics Lab Tech
Kinesiology	AS	

Pre-Engineering	AS

SCHOOL OF EDUCATION	
Early Childhood Education *Available online*	TC*, AAS*, AS
Education	AS

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Accounting

Program Description

The Accounting program develops an understanding of accounting principles, business law, communications, business equipment and related areas of study in the field. Instruction is offered in computerized accounting systems. Technical skills in financial accounting, cost accounting and tax preparation are emphasized.

Sample Careers

Bookkeeper, payroll clerk, junior or staff accountant

Degrees Available

Associate of Science, Associate of Applied Science, Technical Certificate

Concentrations Offered

None

Certificates Offered

Bookkeeper, Fundamental Payroll

Availability of concentrations and degrees varies by campus. Contact your local campus for more information. See page 8 for contact information.

Associate of Science

Articulated transfer through an Associate of Science in Accounting is available with IU Kokomo, IUPUI and IUPUC. To view these transfer degree programs and to see if they are available at your local Ivy Tech campus, students should go to *http://www.ivytech.edu.* Students are encouraged to review these options with their advisors, to consult the current catalog of the institution to which they wish to transfer, and to contact the institution to which they with to transfer. Additional opportunities for course and program transfer may also be available at your local campus. Students should contact the transfer office of their local Ivy Tech for further information.

Associate of Applied Science

To earn this degree, you must have 61 credits in the following areas:

General Education Core	19
Professional/Technical Core	30
Locally Determined Courses	12

General Education (19 Credits)

	COM 101	Fundamentals of Public Speaking	3
*	ECN XXX	Economics Elective	3
	ENG 111	English Composition 3	
	IVY 1XX	Life Skills Elective	1
**	MAT XXX	Intermediate Algebra or Higher	3
*	XXX XXX	Life/Physical Sciences Elective	3
*	XXX XXX	Humanities/Social Sciences Elective	3

Professional/Technical (30 credits)

	ACC 101	Financial Accounting	3
	ACC 102	Managerial Accounting	3
	ACC 105	Income Tax	3
	ACC 201	Intermediate Accounting I	3
	ACC 203	Cost Accounting I	3
^	ACC 225	Integrated Accounting Systems	3
	BUS 101	Introduction to Business	3
	BUS 102	Business Law	3
	CIS 101	Introduction to Microcomputers	3
	OAD 218	Spreadsheets	3

Other Required Courses (12 credits)

	Locally Determined Courses	12

Associate of Applied Science via Distance Education

To earn this degree, you must have 61 credits in the following areas:

General Education	19
Professional/Technical Core	42

General Education (19 Credits)

COM101	Fundamentals of Public Speaking	3
ECN 201	Principles of Macroeconomics	3
or		
ECN 202	Principles of Microeconomics	3
ENG 111	English Composition	3
IVY 1XX	Life Skills Elective	1
MAT 111	Intermediate Algebra	3
XXX XXX	Life/Physical Sciences Elective	3
XXX XXX	Humanities/Social Sciences Elective	3

Professional/Technical (42 credits)

ACC 101	Financial Accounting	3
ACC 102	Managerial Accounting	3
ACC 105	Income Tax	3
ACC 106	Payroll Accounting	3
ACC 201	Intermediate Accounting I	3
ACC 202	Intermediate Accounting II	3
ACC 203	Cost Accounting I	3
ACC 207	Accounting for Government and Nonprofit Entities	3
^ ACC 225	Integrated Accounting Systems	3
BUS 101	Introduction to Business	3
BUS 102	Business Law	3
BUS 210	Managerial Finance	3
or		
CIT 106	Microcomputer Operating Systems	3
or		
OAD 216	Business Communications	3
CIS 101	Introduction to Microcomputers	3
OAD 218	Spreadsheets	3

Agriculture

Program Description

Agriculture is a relevant and high-growth field in Indiana. This new program will provide you with access to new education and transfer opportunities. The Associate of Applied Science in Agriculture will provide you with technical skills and knowledge necessary for a career in agriculture and related industries. You will be prepared to continue your education in a baccalaureate program in agriculture.

Graduates can seek employment in farm management and operation; as technical representatives for seed companies, farm equipment, fertilizer and chemical companies, and grain elevators, and agrichemical companies; and in agribusiness settings such as research laboratories, breed associations, artificial insemination centers, feed and pharmaceutical companies, and meat processors.

Sample Careers

Farm management, technical representative, meat processor

Degrees Available

Associate of Science, Associate of Applied Science

Concentrations Offered

Crop Production, Swine Production

Availability of concentrations and degrees varies by campus. Contact your local campus for more information. See page 8 for contact information.

Technical Certificate

To earn this degree, you must have 31 credits in the following areas:

General Education Core	7
Professional/Technical Core	9
Locally Determined Courses	15

General Education (7 Credits)

**	COM 101	Fundamentals of Public Speaking	3
	or		
**	ENG 111	English Composition	3
	IVY 1XX	Life Skills Elective	1
*	XXX XXX	Humanities/Social Sciences Elective	3

Professional/Technical (9 credits)

ACC 101	Financial Accounting	3
ACC 102	Managerial Accounting	3
CIS 101	Introduction to Microcomputers	3

Other Required Courses (15 credits)

Locally Determined Courses	15

Certificate: Bookkeeper

Professional/Technical (18 credits)

ACC 101	Financial Accounting	3
ACC 102	Managerial Accounting	3
ACC 105	Income Tax	3
ACC 106	Payroll Accounting	3
CIS 101	Introduction to Microcomputers	3
OAD 218	Spreadsheets	3

Certificate: Fundamental Payroll

Professional/Technical (18 credits)

ACC 101	Financial Accounting	3
ACC 106	Payroll Accounting	3
ACC 122	Accounting Systems Application	3
BUS 102	Business Law	3
CIS 101	Introduction to Microcomputers	3
OAD 218	Spreadsheets	3

Associate of Science

Articulated transfer through an Associate of Science in Agriculture is available with Purdue University. To view these Associate of Science transfer degree programs and to see if they are available at your local Ivy Tech campus, students should go to *http://www.ivytech.edu/*. Students are encouraged to review these options with their advisors, to consult the current catalog of the institution to which they wish to transfer, and to contact the institution to which they wish to transfer. Additional opportunities for course and program transfer may also be available at your local campus. Students should contact the transfer office of their local Ivy Tech for further information.

Associate of Applied Science

To earn this degree, you must have 64 credits in the following areas:

General Education Core	19
Professional/Technical Core	24
Concentration Courses	12
Locally Determined Courses	9

General Education (19 Credits)

CHM 101	Introductory Chemistry I	3
COM XXX	Communications Elective	3
ENG 111	English Composition	3
IVY 1XX	Life Skills Elective	1
MAT 1XX	Intermediate Algebra or Higher	3
MAT 1XX	Mathematics Elective	3
or		
SCI XXX	Science Elective	3
XXX XXX	Humanities or Social Sciences Elective	3

Professional/Technical (24 credits)

AGR 110	Introductory Agricultural Business & Economics	3
AGR 114	Intro to Agricultural Systems	3
AGR 115	Animal Production Facilities	3
or		
AGR 122	Crop Machinery and Equipment	3
AGR 120	Internship I	3
AGR 208	Farm Financial Records	3
AGR 210	Management Methods for Agriculture Business	3

Agriculture continued

| AGR 211 | Agriculture Data Management | 3 |
| AGR 212 | Environmental Systems Management | 3 |

Choose One of the Following Concentrations

Crop Production Concentration (21 credits)

AGR 111	Crop Production	3
AGR 117	Soils and Fertilizers	3
AGR 118	Diseases & Weed Control	3
AGR 207	Marketing Agriculture Products	3
Locally Determined Courses		9

Swine Production Concentration (21 credits)

AGR 113	Animal Agriculture	3
AGR 116	Swine Production	3
AGR 205	Animal Nutrition & Livestock Disease	3
AGR 206	Animal Anatomy and Physiology/Genetics	3
Locally Determined Courses		9

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Automotive Technology

Program Description
The Automotive Technology program offers exciting careers and unlimited opportunities. Through the use of modern equipment and A.S.E. master certified instructors, students learn how to diagnose and repair the modern automobile. This is a "hands-on" training program that allows plenty of lab time to develop the skills needed to be a successful automotive technician.

Sample Careers
Body repair technician, insurance adjuster, damage appraiser, automotive service and sales manager

Degrees Available
Associate of Science, Associate of Applied Science, Technical Certificate

Certificates Offered
Automotive Electrical/Electronics. Brakes and Suspension Engine Performance, Power Train

Concentrations Offered
Alternative Fuel Technician, Auto Body Repair, Auto Service, Automotive Service Management, Dealer Co-op High Performance, Motor Sports, Motor Sports Fabrication

Availability of concentrations and degrees varies by campus. Contact your local campus for more information. See page 8 for contact information.

Associate of Science
Articulated transfer through an Associate of Science in Automotive Technology is available with Indiana State University. To view this Associate of Science transfer degree program and to see if it is available at your local Ivy Tech campus, students should go to *http://www.ivytech.edu/*. Students are encouraged to review this option with their advisors, to consult the current catalog of the institution to which they wish to transfer, and to contact the institution to which they wish to transfer. Additional opportunities for course and program transfer may also be available at your local campus. Students should contact the transfer office of their local Ivy Tech for further information.

Associate of Applied Science
To earn this degree, you must have 64 credits in the following areas:

General Education Core	19-20
Professional/Technical Core	18
Concentration Courses	27-30
Locally Determined Courses	0-12

General Education (19-20 Credits)

*	COM XXX	Communications Elective	3
	ENG 111	English Composition	3
	IVY 1XX	Life Skills Elective	1
*	MAT 1XX	Math Elective	3
**	SCI XXX	Physical Science Course	3-4
*	XXX XXX	General Education Elective	3
*	XXX XXX	Humanities/Social Sciences Elective	3

Professional/Technical (18 credits)

AMS 101	Steering and Suspension Systems	3
AMS 107	Engine Principles and Design	3
AMS 113	Electrical and Electronics I	3
AMS 121	Braking Systems	3
AMS 123	Electrical and Electronics II	3
AMS 201	Climate Control Systems	3

Choose One of the Following Concentrations

Alternative Fuel Technician (27 credits)

An alternative fuel technician needs an understanding of traditional vehicle maintenance and repair skills combined with knowledge of alternative fuel systems. This concentration will offer training in safe handing of fuel systems and problem solving techniques.

AMS 103	Principles of Alternative/Renewable Energies	3
AMS 104	Liquid Propane Gas	3
AMS 106	Compressed Natural Gas I	3
AMS 108	Biomass, Biogas, Micro-Turbine Technology	3
AMS 110	Hybrid Systems	3
AMS 111	Alternative Fuels Installation and Application	3
AMS 112	Liquid Propane Gas II	3
AMS 114	Compressed Natural Gas II	3
AMS 127	Engine Repair	
or		
AMS 152	Diesel Engine Theory	3

Automotive Service Management Concentration (30 credits)

Automotive shops operate at their best when they're run smoothly. This concentration will help you develop the necessary wide variety of managerial and technical skills, such as hiring, training, supervision, inventory control, computing, and budget management.

AMS 105 Powertrain Service 3
AMS 109 Engine Performance I 3
AMS 125 Manual Drivetrain Service 3
AMS 127 Engine Repair 3
AMS 135 Automatic Transmission 3
AMS 209 Engine Performance II 3
AMS 219 Engine Performance III 3
AMS 229 Driveability Diagnosis
∧ AMS 243 Advanced Electronics 3
AMS 280 Co-op/Internship 3
or
AMS XXX Automotive Elective 3

Auto Service Concentration (30 credits)

Modern cars need trained technicians to diagnose and repair them. This concentration offers "hands-on" training in engine rebuilding, fuel injection, automatic transmission/transaxle, computer engine control diagnosis and more.

ACC 101	Financial Accounting	3
AMS 253	Service Organization and Parts	3
BUS 101	Introduction to Business	3
BUS 102	Business Law	3
MKT 101	Principles of Marketing	3
TEC 104	Computer Fundamentals for Technology	3
	Regionally Determined Courses 1	2

Auto Body Repair Concentration (30 credits)

Unibody construction and synthetic materials have made advanced training in automotive body repair important for those just entering the fields as well as for those who are currently working. This concentration is designed to teach the skills you need to repair today's auto body.

	ABR 101	Body Repair Fundamentals	3
	ABR 103	Auto Paint Fundamentals	3
∧	ABR 104	Collision Damage Analysis and Repair	3
	ABR 105	Conventional Frame Analysis and Diagnosis	3
	ABR 206	Body Repair II	3
	ABR 207	Automotive Painting Technology	3
	ABR 208	Unibody Structural Analysis and Repair	3
	ABR 209	Collision Damage Appraising	3
	ABR 220	Fiberglass Plastic Repair	3
	MIT 114	Introductory Welding	3

Dealer Co-Op Concentration (30 credits)

This ASE/NATEF master certified training program allows you to choose one of the cooperative education specialties which combine classroom and lab training at the college with hands-on work experience at an independent service facility or franchise dealership.

	AMS 107	Engine Principles and Design	3
	AMS 109	Engine Performance I	3
∧	AMS 243	Advanced Electronics	3
	AMS 271	Cooperative - Drivelines	3
	AMS 272	Cooperative - Suspension	3
	AMS 273	Cooperative - Brakes	3
	AMS 274	Cooperative - Electrical Systems	3
	AMS 275	Cooperative - Engine Repair	3
	AMS 276	Cooperative - Engine Performance	3

TEC 104	Computer Fundamentals for Technology	3

High Performance Concentration (30 credits)

NASCAR. Sport modifieds. High performance engines. The automotive technology program provides diagnostic, high-tech problem solving education in specific techniques that employers demand on a daily basis. Integrated electronic systems and complex computers run vehicles and measure their performance while on the road.

AMS 105	Powertrain Service	3
AMS 125	Manual Drivetrains	3
AMS 127	Engine Repair	3
AMS 135	Automotive Transmission	3
AMS 149	Introduction to Motor Sports	3
AMS 250	Motor Sports Fabrication I	3
AMS 254	High Performance Engines/Systems I	3
AMS 255	High Performance Engines/Systems II	3
AMS 258	Motorsports Kit Car Building	3
AMS 261	Dynamometer Testing and Analysis	3

Motor Sports Fabrication Concentration (30 credits)

Do you like fast cars? Want to work with automotive, aviation, marine, motorcycle, motorsports and racing industries? This training program offers the education demanded by employers. By combining lessons in the classroom with practical hands-on experience in the lab or at the track, you will set your career in gear.

AMS 149	Introduction to Motor Sports	3
AMS 250	Motor Sports Fabrication I	3
AMS 251	Motor Sports Fabrication II	3
AMS 257	Composite Fabrication I	3
AMS 263	Blueprint and CAD Basics for Motor Sports	3
DSN 221	Statistics	3
MIT 120	Metallurgy Fundamentals	3
MTT101	Introduction to Machining	3
WLD 207	Gas Metal Arc (MIG) Welding	3
WLD 208	Gas Tungsten Arc (TIG) Welding	3

Automotive Technology continued

Technical Certificate

To earn this degree, you must have 31 credits in the following areas:

General Education Core	7
Professional/Technical Core	3
Concentration Courses	6
Locally Determined Courses	15

General Education (6 Credits)

** COM XXX	Communications Course	3
IVY 1XX	Life Skills Elective	1
** XXX XXX	General Education Course	3

Professional/Technical (3 credits)

AMS 101	Steering and Suspension Systems	3

Choose One of the Following Concentrations

Alternative Fuel Technician Concentration (21 credits)

AMS 103	Principles of Alternative/Renewable Energies	3
AMS 104	Liquid Propane Gas	3
AMS 106	Compressed Natural Gas I	3
AMS 108	Biomass, Biogas, Micro-Turbine Technology	3
AMS 111	Alternative Fuels Installation and Application	3
AMS 113	Electrical and Electronics I	3
AMS 121	Braking Systems	3

Auto Body Repair Concentration (21 credits)

ABR 101	Body Repair Fundamentals	3
ABR 103	Auto Paint Fundamentals	3
	Locally Determined Courses	15

Automotive Service Management Concentration (21 credits)

AMS 113	Electrical and Electronics I	3
AMS 121	Braking Systems	3
	Locally Determined Courses	15

Motor Sports Concentration (21 credits)

AMS 107	Engine Principles and Design	3
AMS 113	Electrical and Electronics	3

Choose five of the following:

AMS 121	Braking Systems	3
* AMS 149	Introduction to Motor Sports	3
AMS 250	Motor Sports Fabrication I	3
AMS 251	Motor Sports Fabrication II	3
AMS 254	High Performance Engines/Systems I	3
AMS 255	High Performance Engines/Systems II	3
AMS 257	Composit Fabrication I	3
AMS 258	Motor Sports Kit Car Building	3
AMS 261	Dynamometer Testing and Analysis	3
AMS263	Blueprint and CAD Basics for Motor Sports	3
MTT 101	Introduction to Machining	3
WLD 207	Gas Megtal Arc (MIG) Welding	3
WLD 208	Gas Tungsten Arc (TIG) Welding	3

Certificates

Automotive Electrical/Electronics (18 Credits)

AMS 109	Engine Performance I	3
AMS 113	Electrical and Electronics I	3
AMS 123	Electrical and Electronics II	3
AMS 201	Climate Control Systems	3
AMS 209	Engine Performance II	3
AMS 219	Engine Performance III	3

Brakes and Suspension (18 Credits)

AMS 101	Steering and Suspension Systems	3
AMS 105	Powertrain Service	3
AMS 109	Engine Performance	3
AMS 113	Electrical and Electronics I	3
AMS 121	Braking Systems	3
AMS 123	Electrical and Electronics II	3

Engine Performance (18 Credits)

AMS 107	Engine Principles and Design	3
AMS 109	Engine Performance I	3
AMS 113	Electrical and Electronics I	3
AMS 209	Engine Performance II	3
AMS 219	Engine Performance III	3

AMS 229	Driveability Diagnosis	3

Power Train (18 Credits)

AMS 105	Powertrain Service	3
AMS 107	Engine Principles and Design	3
AMS 113	Electrical and Electronics I	3
AMS 125	Manual Drivetrains	3
AMS 127	Engine Repair	3
AMS 135	Automotive Transmission	3

IVY TECH
COMMUNITY
COLLEGE

Aviation Technology

Program Description

The Aviation Technology program will prepare you to become a certified Aviation Technicians with ratings for Aircraft Maintenance or Avionics. The course of instruction introduces control methods, team building, technical writing and computer skills.

Sample Careers

Employment with commercial air carriers and private maintenance operations

Degrees Available

Associate of Applied Science

Concentrations Offered

Aircraft Maintenance Technician

Associate of Applied Science

To earn this degree, you must have 96 credits in the following areas:

General Education Core	19
Professional/Technical Core	17
Concentration Courses	60

General Education (19 Credits)

ENG 111	English Composition	3
ENG 211	Technical Writing	3
MAT 111	Intermediate Algebra	3
MAT 131	Algebra/Trigonometry I	3
PHY 101	Physics I	4
* XXX XXX	Humanities/Social Sciences Elective	3

Professional/Technical (17 Credits)

AVT 141	Aviation Basics I	3
AVT 142	Aviation Basics II	3
AVT 144	Aircraft Electricity	4
AVT 145	Aircraft Ground Servicing	2
AVT 146	Aviation Regulations	2
AVT 148	Aviation Materials and Processes	3

This concentration will prepare you to keep aircraft operating safely and efficiently.

Aircraft maintenance Technician Concentration
(60 Credits)

AVT 222	Nonmetallic Structures	2
AVT 223	Aircraft Finishes	2
AVT 224	Aircraft Inspection	4
AVT 225	Aircraft Fluid Systems	4
AVT 226	Airframe Electrical Systems	4
AVT 227	Aircraft Sheetmetal	6
AVT 228	Aircraft Instruments and Avionics	3
AVT 231	Reciprocating Powerplants	5
AVT 232	Turbine Powerplants	5
AVT 233	Powerplant Fuel and Induction Systems	5
AVT 234	Reciprocating Engine Ignition and Fuel Systems	2
AVT 235	Powerplant Fluid and Indicating Systems	3

AVT 236	Turbine Starting Systems and Auxiliary Power	2
AVT 237	Propellers	4
^ AVT 238	Turbine Systems and Components	4
AVT 240	Structural Repair	5

IVY TECH
COMMUNITY
COLLEGE

Biotechnology

Program Description

Do you want a career on the cutting edge? The biotechnology program will prepare you to work in a variety of life science laboratory settings. Emphasis is placed on learning applications such as analysis of biological molecules, use of bioreactors and fermentors, recombinant DNA technology, generation of cell cultures and safe operation of laboratory equipment.

Sample Careers
Clinical or Laboratory Technician

Degrees Available
Associate of Science, Associate of Applied Science

Concentrations Offered
None

Availability of concentrations and degrees varies by campus. Contact your local campus for more information. See page 8 for contact information.
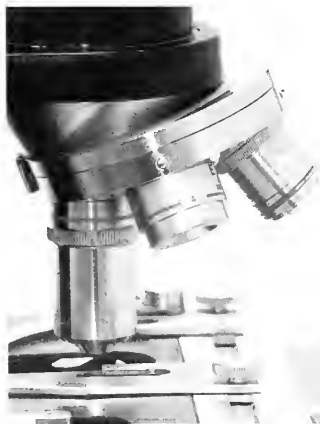
Associate of Science

Articulated transfer through an Associate of Science in Biotechnology is available with IUPUI. To view this Associate of Science transfer degree program and to see if it is available at your local Ivy Tech campus, students should go to *http://www.ivytech.edu/*.

Students are encouraged to review this option with their advisors, to consult the current catalog of the institution to which they wish to transfer, and to contact the institution to which they wish to transfer. Additional opportunities for course and program transfer may also be available at your local campus. Students should contact the transfer office of their local Ivy Tech for further information.

Associate of Applied Science

To earn this degree, you must have 67-68 credits in the following areas:

General Education Core	24-25
Professional/Technical Core	31
Locally Determined Courses	12

General Education (24-25 Credits)

BIO 121	General Biology	4
CHM 105	General Chemistry I	5
CHM 106	General Chemistry II	5
ENG 111	English Composition	3
MAT 133	College Algebra with Analytic Geometry	4
or		
MAT 136	College Algebra	3
XXX XXX	Humanities/Social Science Elective	3
IVY XXX	Life Skills Elective	1

Professional/Technical (43 credits)

COM 101	Fundamentals of Public Speaking	3
or		
COM 102	Introduction to Interpersonal Communication	3
BTN 101	Introduction to Biotechnology	4
BTN 103	Safety and Regulatory Compliance for Biotechnology	3
BTN 201	Cell Culture and Cellular Processes	4
BTN 211	Analytical Methods for Biotechnology I	3

BTN 212	Analytical Methods for Biotechnology II	3
BTN 227	Genetic Engineering and DNA Analysis	4
BTN 233	Protein Analysis and Purification	4
BTN 280	Internship	3
Locally Determined Courses		12

IVY TECH
COMMUNITY
COLLEGE

Building Construction Management

Program Description
The Building Construction Management program will prepare you for work in residential, commercial and industrial construction and construction consulting. Emphasis is placed on building a foundation in materials science, concrete and soil technology, statics and strength of materials science, surveying and building fabrication.

Sample Careers
Field engineer, Estimator

Degrees Available
Associate of Science, Associate of Applied Science

Concentrations Offered
None
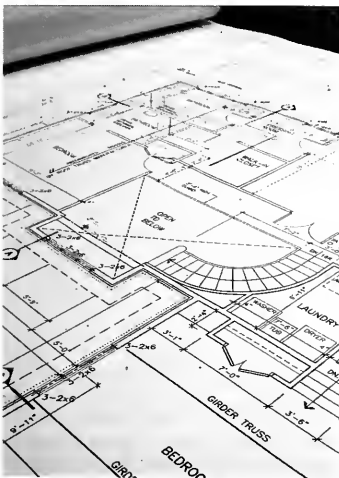
Associate of Science
Articulated transfer through an Associate of Science in Building Construction Management is available with Indiana State University. To view this Associate of Science transfer degree program and to see if it is available at your local Ivy Tech campus, students should go to http://www.ivytech.edu/.

Students are encouraged to review this option with their advisors, to consult the current catalog of the institution to which they wish to transfer, and to contact the institution to which they wish to transfer. Additional opportunities for course and program transfer may also be available at your local campus. Students should contact the transfer office of their local Ivy Tech for further information.

Associate of Applied Science
To earn this degree, you must have 62 credits in the following areas:

General Education Core	20
Professional/Technical Core	30
Locally Determined Courses	12

General Education (20 Credits)

COM 101	Fundamentals of Public Speaking	3
ENG 111	English Composition	3
IVY 1XX	Life Skills Elective	1
MAT 13X	First Course in a Series	3
MAT 13X	Second Course in a Series	3
PHY 101	Physics I	4
XXX XXX	Humanities/Social Science Elective	3

Professional/Technical (44 credits)

BCM 102	Construction Graphics and Print Reading	3
BCM 104	Commercial and Industrial Construction	3
BCM 105	Concrete and Soils	3
BCM 115	Construction Management Practices	3
BCM 206	Construction Estimating	3
BCM 210	Codes and Specifications	3
BCM 220	Project Planning and Control	3
DSN 210	Surveying	3
DSN 221	Statics	3
DSN 222	Strength of Materials	3
Locally Determined Courses		12

IVY TECH
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Business Administration

Program Description

Whether your career goal is to start your own business, to advance your career in an existing business, or to continue your education at a four-year institution, the Business Administration program can be a stepping stone on your path to success. The program provides outstanding career opportunities by giving you new job skills or by improving the ones you already possess.

Sample Careers

Sales assistant, first line manager, real estate office assistant, restaurant assistant manager

Degrees Available

Associate of Science, Associate of Applied Science, Technical Certificate

Certificates Offered

Human Resource Management

Concentrations Offered

Agri-Business, eBusiness, Financial Services, Health Care Admin., Human Resources, International Business, Logistics, Management, Marketing, Operations, Quality Management, Real Estate, Restaurant Management

Availability of concentrations and degrees varies by campus. Contact your local campus for more information. See page 8 for contact information.

Associate of Science

Articulated transfer through an Associate of Science in Business Administration is available with Ball State University, Indiana State University, IU East, IU Kokomo, IU South Bend, IUPU Columbus, IUPU-Fort Wayne, Indiana Wesleyan University, Purdue University and the University of Southern Indiana. To view these Associate of Science transfer degree programs and to see if they are available at your local Ivy Tech campus, students should go to *http://www.ivytech.edu/*.

Students are encouraged to review these options with their advisors, to consult the current catalog of the institution to which they wish to transfer, and to contact the institution to which they wish to transfer. Additional opportunities for course and program transfer may also be available at your local campus. Students should contact the transfer office of their local Ivy Tech for further information.

Associate of Applied Science

To earn this degree, you must have 61-67 credits in the following areas:

General Education Core	19
Professional/Technical Core	18
Concentration Courses	12-15
Locally Determined Courses	9-12

General Education (19 Credits)

	COM 101 Fundamentals of Public Speaking	3
*	ECN XXX Economics Elective	3
	ENG 111 English Composition	3
	IVY 1XX Life Skills Elective	1
**	MAT 1XX Intermediate Algebra or higher	3
*	XXX XXX Life / Physical Sciences Elective	3
*	XXX XXX Humanities / Social Sciences Elective	3

Professional/Technical (44 credits)

ACC 101	Financial Accounting	3
BUS 101	Introduction to Business	3
BUS 102	Business Law	3
BUS 105	Principles of Management	3
CIS 101	Introduction to Microcomputers	3

MKT 101	Principles of Marketing	3

Choose One of the Following Concentrations

Agri-Business Concentration (24 credits)

Agri-business students will develop the skills needed to assist the producers of food and fiber products in the areas of accounting, customer service, computer applications, sales and office management..

AGR 110 Introductory Agricultural Business and Economics		3
AGR 111 Crop Production		3
AGR 112 Fundamentals of Horticulture or		3
AGR 113 Animal Agriculture or		3
AGR 114 Introduction to Agricultural Systems		3
AGR 210 Management Methods for Agriculture Business		3
^ BUS 204 Case Problems in Business		3
Locally Determined Courses		9

eBusiness Concentration (24 credits)

This concentration covers the latest technology. It will prepare you to focus on the utilization of electronic means to conduct business. E-business applications to be discussed include those of business to consumer, business to business, and intra business.

^ BUS 204	Case Problems in Business	3
BUS 209	Introduction to eBusiness	3
CIS 252	Web Site Development	3
MKT 240	Internet Marketing	3
Locally Determined Courses		12

Financial Services Concentration (24 credits)

If you're interested in a career in a financial institution, this is the concentration for you. It will prepare you for careers in banks, credit unions and other lending institutions by way of classes such as principles of banking, personal finance, and consumer lending.

BNK 101	Principles of Banking	3
BNK 103	Consumer Lending	3
^ BUS 204	Case Problems in Business	3
BUS 108	Personal Finance	
Locally Determined Courses		12

Health Care Administration Concentration (24 credits)

The health care industry is thriving and this concentration will help

you get your foot in the door. The emphasis is put on understanding health care management systems and principles of human resource management, as they apply to health care settings.

BUS 202	Human Resource Management	3
^ BUS 204	Case Problems in Business	3
HLT 125	Health Care Systems and Trends	3
HLT 226	Organizational Development in Health Care	3
	Locally Determined Courses	12

Human Resources Concentration (24 credits)
This new concentration results in an AAS degree. You will gain knowledge and skills in the strategic planning and administration of recruitment, staffing, compensation and benefits, employment law, labor relations, and occupational safety and health.

BUS 202	Human Resource Management	3
^ BUS 204	Case Problems in Business	3
BUS 222	Benefits Administration	3
BUS 223	Occupational Safety and Health	3
	Locally Determined Courses	12

International Business Concentration (24 credits)
The international business concentration places emphasis on understanding the international market place and the logistics associated with conducting business internationally.

^ BUS 204	Case Problems in Business	3
BUS 207	Introduction to International Business	3
BUS 227	Logistics/Supply Chain Management	3
BUS 243	International Marketing	3
	Locally Determined Courses	12

Logistics Concentration (24 credits)
This program will give you a solid foundation in the concepts and applications of logistics, including fundamentals, technical skills and critical thinking skills. You will also get hands-on experience.

^ BUS 204	Case Problems in Business	3
BUS 227	Logistics / Supply Chain Management	3
BUS 228	Principles of Purchasing	3
BUS 229	Transportation Systems	3
Locally	Determined Courses	12

Management Concentration (24 credits)
Do you dream of managing a business? This concentration allows

you to focus on the various aspects of managing a business or organizational department, such as human resources management, financial management and business development skills.

BUS 202	Human Resources Management	3
BUS 203	Business Development	3
^ BUS 204	Case Problems in Business	3
BUS 210	Managerial Finance	3
	Locally Determined Courses	12

Marketing Concentration (24 credits)
The marketing concentration allows you to develop skills important to a marketing and retail environment, such as market research, promotion management, and retail management. You'll find these vital for working in a marketing or retail firm.

^ BUS 204	Case Problems in Business	3
MKT 104	Promotion Management	3
MKT 201	Introduction to Market Research	3
MKT 220	Principles of Retailing	3
	Locally Determined Courses	12

Operations Concentration (24 credits)
The operations management concentration places emphasis on operations and quality management.

^ BUS 204	Case Problems in Business	3
OPM 102	Techniques of Supervision I	3
OPM 224	Operations Management	3
QSC 204	Total Quality Management	3
	Locally Determined Courses	12

Quality Management Concentration (24 credits)
The quality management concentration places emphasis on maintaining product quality through the use of statistics and technological techniques.

^ BUS 204	Case Problems in Business	3
QSC 101	Quality Control Concepts and Techniques I	3
QSC 102	Statistical Process Control	3
QSC 202	Quality Control Concepts and Techniques II	3
	Locally Determined Courses 1	2

Real Estate Concentration (24 credits)
This concentration is primarily designed to prepare you to pass one or more of the State licensing examinations. This includes the Real

Estate Salesperson's license, the Real Estate Broker license and the Residential Appraisal license.

MKT 221	Real Estate Broker	3
MKT 222	Real Estate Sales	3
MKT 223	Real Estate Appraising	5
MKT 224	Uniform Standards of Professional Appraisal Practice (USPAP)	1
^ BUS 204	Case Problems in Business	3
	Locally Determined Courses	9

Restaurant Management Concentration (24 credits)
Owning or operating a restaurant can be both exhilarating and exhausting. This concentration will prepare you for both emotions by placing an emphasis on understanding restaurant operations.

^ BUS 204	Case Problems in Business	3
HOS 101	Sanitation and First Aid	3
HOS 207	Table Service	3
HOS XXX	Regional Elective	3
	Locally Determined Courses	12

Associate of Applied Science via Distance Education

To earn this degree, you must have 61 credits in the following areas:

| General Education Core | 19 |
| Professional/Technical Core | 42 |

Financial Services Concentration (61 credits)

General Education (19 Credits)

COM 101	Fundamentals of Public Speaking	3
ECN XXX	Economics Elective	3
ENG 111	English Composition	3
IVY 1XX	Life Skills Elective	1
MAT 1XX	Intermediate Algebra or Higher	3
XXX XXX	Life/Physical Sciences Elective	3
XXX XXX	Humanities/Social Sciences Elective	3

Professional/Technical (42 credits)

| ACC 101 | Financial Accounting | 3 |

Business Administration continued

BNK 101	Principles of Banking	3
BNK 103	Consumer Lending	3
BUS 101	Introduction to Business	3
BUS 102	Business Law	3
BUS 105	Principles of Management	3
BUS 120	Business Ethics and Social Responsibility	3
^ BUS 204	Case Problems in Business	3
CIS 101	Introduction to Microcomputers	3
MKT 101	Principles of Marketing	3
MKT 205	Principles of Insurance	3
OAD 216	Business Communications	3

Choose two courses from the list below:

BNK 216	Analyzing Financial Statements	3
BNK 219	Bank Management	3
OAD 218	Spreadsheets	3

Management Concentration (61 credits)

General Education (19 Credits)

COM 101	Fundamentals of Public Speaking	3
ECN XXX	Economics Elective	3
ENG 111	English Composition	3
IVY 1XX	Life Skills Elective	1
MAT 111	Intermediate Algebra	3
or		
MAT 118	Concepts in Mathematics	3
XXX XXX	Life/Physical Sciences Elective	3
XXX XXX	Humanities/Social Sciences Elective	3

Professional/Technical (42 credits)

ACC 101	Financial Accounting	3
BUS 101	Introduction to Business	3
BUS 102	Business Law	3
BUS 105	Principles of Management	3
BUS 120	Business Ethics and Social Responsibility	3
BUS 202	Human Resource Management	3
BUS 203	Business Development	3
^ BUS 204	Case Problems in Business	3
BUS 210	Managerial Finance	3
CIS 101	Introduction to Microcomputers	3
MKT 101	Principles of Marketing	3

MKT 102	Principles of Selling	3
OAD 216	Business Communications	3
OPM 102	Techniques of Supervision	3

Marketing Concentration (61 credits)

General Education (19 Credits)

COM 101	Fundamentals of Public Speaking	3
ECN XXX	Economics Elective	3
ENG 111	English Composition	3
IVY 1XX	Life Skills Elective	1
MAT 111	Intermediate Algebra	3
or		
MAT 118	Concepts in Mathematics	3
XXX XXX	Life/Physical Sciences Elective	3
XXX XXX	Humanities/Social Sciences Elective	3

Professional/Technical Core (42 credits)

ACC 101	Financial Accounting	3
BUS 101	Introduction to Business	3
BUS 102	Business Law	3
BUS 105	Principles of Management	3
BUS 120	Business Ethics and Social Responsibility	3
^ BUS 204	Case Problems in Business	3
CIS 101	Introduction to Microcomputers	3
MKT 101	Principles of Marketing	3
MKT 102	Principles of Selling	3
MKT 104	Promotion Management	3
MKT 110	Consumer Behavior	3
MKT 201	Introduction to Market Research	3
MKT 220	Principles of Retailing	3
OAD 216	Business Communications	3

Technical Certificate

To earn this degree, you must have 31-34 credits in the following areas:

General Education Core	7
Professional/Technical Core	3
Concentration Courses	6-18
Locally Determined Courses	3-18

General Education (7 Credits)

** ENG 111	English Composition	3
IVY 1XX	Life Skills Elective	1
XXX XXX	Humanities/Social Science Elective	3

Professional/Technical (3 credits)

BUS 101	Introduction to Business	3

Choose One of the Following Concentrations

Financial Sales Concentration (21 credits)

ACC 101	Financial Accounting	3
BNK 101	Principles of Banking	3
BNK 103	Consumer Lending	3
Locally Determined Courses		12

Health Care Administration Concentration (24 credits)

BUS 202	Human Resources Management	3
HLT 125	Health Care Systems and Trends	3
Locally Determined Courses		18

Human Resources Concentration (21 credits)

BUS 102	Business Law	3
BUS 105	Principles of Management	3
BUS 202	Human Resource Management	3
BUS 222	Benefits Administration	3
BUS 223	Occupational Safety and Health	3
CIS 101	Introduction to Microcomputers	3
Locally Determined Courses		3

Management Concentration (21 credits)

CIS 101	Introduction to Microcomputers	3
BUS 105	Principles of Management	3
Locally	Determined Courses	15

Marketing Concentration (21 credits)

CIS 101	Introduction to Microcomputers	3
MKT 101	Principles of Marketing	3
Locally Determined Courses		15

Operations Concentration (21 credits)

CIS 101	Introduction to Microcomputers	3
OPM 102	Techniques of Supervision I	3
	Locally Determined Courses	15

Quality Management Concentration (21 credits)

CIS 101	Introduction to Microcomputers	3
QSC 101	Quality Control Concepts and Techniques I	3
	Locally Determined Courses	15

Certificate

Human Resources Management (21 credits)

BUS 101	Introduction to Business	3
BUS 105	Principles of Management	3
BUS 202	Human Resource Management	3
BUS 221	Principles of Employment	3
BUS 222	Benefits Administration	3
BUS 223	Occupational Safety and Health	3
OPM 211	Labor Relations	3

Central Service Technician

Program Description
Find your place in the ever-growing healthcare industry. Central service departments are the center of all activity surrounding supplies and equipment needed in surgery and other patient care areas. You would have a major role in preventing infections by cleaning, decontaminating, assembling, sterilizing, and packaging all instruments used during surgery.

Sample Careers
Central Service Technician

Degrees Available
Technical Certificate

Availability of concentrations and degrees varies by campus. Contact your local campus for more information. See page 8 for contact information.

Technical Certificate

General Education Core	7
Professional/Technical Core	29

General Education (7 Credits)

ENG 111	English Composition	3
IVY 1XX	Life Skills Elective	1
PSY 101	Introduction to Psychology	3

Professional/Technical (29 credits)

CST 101	Infection Control Procedures	4
CST 102	Surgical Instrumentation	2
CST 104	Clinical Applications I	3
CST 105	Fundamentals of Central Service Technician Skills	4
CST 106	Clinical Applications II	3
CST 107	Application of Central Service Technician Skills	3
CST 108	Clinical Applications III	4
HHS 100	Introduction to Health Careers	3
HHS 101	Medical Terminology	3

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Chemical Technology

Program Description

If you're interested in science and mathematics, chemical technology could be for you. The focus of the program is using principles of science, math and technology to prepare and analyze samples in a variety of laboratory settings

Sample Careers

Laboratory Technician, Forensic Technician

Degrees Available

Associate of Applied Science

Concentrations Offered

Chemical Laboratory Technician, Forensics Laboratory Technician

Availability of concentrations and degrees varies by campus. Contact your local campus for more information. See page 8 for contact information.

44

Associate of Applied Science

To earn this degree, you must have 63 or 64 credits in the following areas:

General Education Core	23
Professional/Technical Core	22
Concentration Courses	17-18

General Education (23 Credits)

CHM 105	General Chemistry I	5
CHM 106	General Chemistry II	5
* COM XXX	Communication Elective	3
ENG 111	English Composition	3
IVY XXX	Life Skills Elective	1
MAT 136	College Algebra	3
* XXX XXX	Humanities/Social Sciences Elective	3

Professional/Technical (44 credits)

CHT 101	Industrial Laboratory Techniques	3
CHT 170	Success in Science	1
CHT 201	Industrial Instrumentation and Techniques I	3
CHT 202	Industrial Instrumentation and Techniques II	3
CHM 211	Organic Chemistry I	5
CHT 270	Professional Development	1
^ CHT 280	Co-op/Internship	3
TEC 104	Computer Fundamentals for Technology	3

Choose One of the Following Concentrations

If you have an interest in science, mathematics, health, or technology, and have good communication skills, you may find success as a chemical lab technician. Chemical lab technicians work in laboratories and production facilities. They use state of the art technological equipment to gather and analyze data.

Chemical Labratory Technician Concentration
(17 credits)

CHT 204	Presentation of Technical Issues	3
CHT 207	Food, Drugs, and Polymers	3
CHT 210	Quantitative Analysis	3
CHM 212	Organic Chemistry II	5
QSC 101	Quality Control Concepts and Techniques I	3

The forensic laboratory technician concentration will help you develop skills of quantitative and qualitative analysis to be used in laboratories of police departments, crime scene investigation and morgues.

Forensic Laboratory Technician Concentration
(18 credits)

CHM 212	Organic Chemistry II	5
CRJ 101	Introduction to the Criminal Justice Systems	3
CRJ 105	Introduction to Criminology	3
FRN 101	Introduction to Forensic Science	3
FRN 203	Crime Methods and Techniques	4

IVY TECH
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Community Emergency Preparedness & Management

Program Description

Significant changes have occurred since September 2001. The Community Emergency Preparedness and Management program is designed to address those changes and enhance the ability of individuals to prevent and respond safely and recover from natural or man-made disasters.

This program has been carefully designed with input from employers who know the demand of emergency management. In short, careers in emergency preparedness and response and environmental health and safety are in demand. Those benefiting from the associate degree are first responders, firefighters, military personnel, corrections and law enforcement professionals, emergency managers, those in the health care professions, as well as corporate and government workers.

Sample Careers

Environmental science and protection technicians, firefighters, first line supervisors of firefighting and prevention workers

Degrees Available

Associate of Science

Concentrations Offered

None

Availability of concentrations and degrees varies by campus. Contact your local campus for more information. See page 8 for contact information.

Associate of Science

To earn this degree, you must have 66-67 credits in the following areas:

General Education Core	24-26
Professional/Technical Core	42

General Education (24-26 Credits)

*English/Communications (9 credits) Choose 3 courses:

COM 101	Fundamentals of Public Speaking	3
COM 102	Introduction to Interpersonal Communication	3
ENG 111	English Composition	3
ENG 211	Technical Writing	3

*Mathematics (3 credits)

MAT 1XX	Intermediate Algebra or higher	3

*Humanities/Social Sciences (9 credits) Choose 3 courses:

PHL 102	Introduction to Ethics	3
POL 101	Introduction to American Government and Politics	3
POL 112	State and Local Government	3
PSY 253	Introduction to Social Psychology	3
SOC 111	Introduction to Sociology	3

*Life/Physical Sciences (3-5 credits)

BIO 201	General Microbiology I	4
CHM 105	General Chemistry	5
CHM 111	Chemistry I	4
SCI 111	Physical Science	3

Professional/Technical (44 credits)

CEP 101	Introduction to Homeland Security	3
CEP 102	Principles of Emergency Management and Planning	3
CEP 103	Basic Skills in Emergency Program Management	3
CEP 104	Disaster and Terrorism Awareness	3
CEP 105	Introduction to Mitigation	3
CEP 106	Disaster Response and Recovery Operations	3
CEP 107	Exercise Program Design, Planning and Evaluation	3
CEP 210	Understanding and Combating Terrorism	3
CEP 212	Homeland Security Intelligence Ops and Tactical Skills	3
CEP 213	Weapons of Mass Destruction and Hazardous Materials	3
CEP 214	Understanding the Incident Command System	3
CEP 215	Contingency Planning and Incident Command	3
CEP 216	Public Information Officers Course	3
^ CEP 257	Preparedness Practicum	3

IVY TECH
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Computer Information Systems

Program Description

Get the knowledge you need to meet today's business requirements in the computer world. The CIS curriculum is designed to provide a flexible and comprehensive education. You will be instructed in both theoretical concepts and practical applications. You also will become familiar with programming languages, operating systems, database management systems, and web design, as well as application programming concepts and practices.

Sample Careers

Information Manager, Website Manager, Computer Programmer

Degrees Available

Associate of Science, Associate of Applied Science Technical Certificate

Certificates Offered

Database, Java Programming, Visual Programming Web Management

Concentrations Offered

Database Management, Programmer/Analyst Student Directed Studies, Web Management

Availability of concentrations and degrees varies by campus. Contact your local campus for more information. See page 8 for contact information.

Associate of Science

Articulated transfer through an Associate of Science in Computer Information Systems is available with Indiana State University, IUPUI, IUPU-Columbus, IU East and the University of Southern Indiana. To view these Associate of Science transfer degree programs and to see if they are available at your local Ivy Tech campus, students should go to *http://www.ivytech.edu/*.

Students are encouraged to review these options with their advisors, to consult the current catalog of the institution to which they wish to transfer, and to contact the institution to which they wish to transfer. Additional opportunities for course and program transfer may also be available at your local campus. Students should contact the transfer office of their local Ivy Tech for further information.

Associate of Applied Science

To earn this degree, you must have 62 credits in the following areas:

General Education Core	19
Professional/Technical Core	28
Concentration Courses	12
Locally Determined Courses	3

General Education (19 Credits)

COM 101	Fundamentals of Public Speaking	3
* ECN XXX	Economics Elective	3
ENG 111	English Composition	3
IVY 1XX	Life Skills Elective	1
** MAT 1XX	Intermediate Algebra or Higher	3
* XXX XXX	Humanities/Social Sciences Elective	3
* XXX XXX	Life/Physical Sciences Elective	3

Professional/Technical (28 credits)

ACC 101	Financial Accounting	3
BUS 101	Introduction to Business	3
CIS 102	Information Systems Fundamentals	3
CIS 113	Logic, Design and Programming	3
CIS 125	Database Design and Management	3
CIS 157	Web Site Development	3
CIS 203	Systems Analysis and Design	3

CIS 279	Capstone Class (new course)	1
CIT 106	Microcomputer Operating Systems	3
CIT 121	Network Fundamentals	3

Choose One of the Following Concentrations

Database Management Concentration (15 credits)
The focus of the Database Management concentration is learning to work with the storage and management of electronic data. Emphasis is placed on learning database management systems software and understanding and recommending user system requirements and data storage methods.

Four courses from list:

CIS 131	Structured Query Language	3
CIS 205	Database Design Using Oracle	3
CIS 225	Advanced Database Management Systems	3
CIS XXX	Programming Course Involving Database Manipulation	3
CIS 251	Introduction to Systems Security	3
	Locally Determined Courses	3

Programmer/Analyst Concentration (15 credits)
Interested in learning a different language? Just like humans, computers speak their own languages. This concentration places emphasis on developing advanced programming skills, mastering a variety of computer languages.

Four courses from list:

CIS 107	Microcomputer Programming	3
CIS 112	Introduction to Simulations and Game Development	3
CIS 118	Introduction to COBOL Programming	3
CIS 121	C/C++/C# Programming	3
CIS 122	RPG Programming Fundamentals	3
CIS 123	Assembler Language Programming	3
CIS 124	Pascal Programming	3
CIS 126	Shell Command Language for Programmers	3
CIS 131	Structured Query Language	3
CIS 136	Introduction to Java Programming	3
CIS 137	Visual Basic Programming	3
CIS 218	Advanced COBEL Programming	3
CIS 221	Advanced C/C++/C# Programming	3

CIS 222	Advanced RPG Programming	3
CIS 236	Advanced JAVA Programming	3
CIS 237	Advanced Visual Basic Programming	3
CIS 238	Advanced Simulation and Game Development	3
CIS 253	Graphics Image Lab	3
Locally Determined Courses		3

Student Directed Studies Concentration (15 credits)
The student directed studies concentration allows you to select elective courses from a wide list of options, focusing on specific areas of interest.

Four courses from the list:

ACC XXX	Accounting Elective	0-12
BUS XXX	Business Elective	0-12
CIS XXX	Computer Information Systems Elective	0-12
CIT XXX	Computer Information Technology Elective	0-12
CRJ XXX	Criminal Justice Elective	0-12
ECT XXX	Electronics and Computer Technology	0-12
ENG 211	Technical Writing	0-3
OAD XXX	Office Administration Elective	0-12
VIS XXX	Visual Communications Elective	0-12
Locally Determined Courses		3

Web Management Concentration (15 credits)
Websites must be both appealing and functional. This concentration will help you develop the skills necessary to manage great websites. Those skills include graphic design, understanding of operating systems, principles in eBusiness and programming techniques.

Four courses from the list:

BUS 209	Introduction to e-Business	3
CIS 136	Introduction to Java Programming	3
CIS 137	Visual Basic Programming	3
CIS 236	Advanced Java Programming	3
CIS 253	Graphic Image Lab	3
CIS 257	Advanced Web Site Development (required)	3
CIS 259	Web Administration (required)	3
CIS XXX	Web-based Programming Elective	3
CIT 109	UNIX Operating System	3
CIT 201	Advanced Operating Systems: LINUX (required)	3
Locally Determined Courses		3

Associate of Applied Science via Distance Education

To earn this degree, you must have 62 credits in the following areas:

General Education Core	19
Professional/Technical Core	28
Concentration Courses	15

General Education (19 Credits)

	COM 101	Fundamentals of Public Speaking	3
	ECN XXX	Economics Elective	3
*	ENG 111	English Composition	3
	IVY 1XX	Life Skills Elective	1
**	MAT 1XX	Intermediate Algebra or Higher	3
*	XXX XXX	Humanities/Social Sciences Elective	3
*	XXX XXX	Life/Physical Sciences Elective	3

Professional/Technical (28 credits)

(CIS 101 Competencies must be demonstrated by assessment or successful completion of CIS 101)

ACC 101	Financial Accounting	3
BUS 101	Introduction to Business	3
CIS 102	Information Systems Fundamentals	3
CIS 113	Logic, Design and Programming	3
CIS 125	Database Design and Management	3
CIS 157	Web Site Development	3
CIS 203	Systems Analysis and Design	3
CIS 279	Capstone Class	1
CIT 106	Microcomputer Operating Systems	3
CIT 121	Network Fundamentals	3

Concentration (15 credits)

| Locally Determined Courses | 15 |

Technical Certificate

To earn this degree, you must have 31 credits in the following areas:

General Education Core	7
Professional/Technical Core	3
Concentration Courses	6
Locally Determined Courses	15

General Education (7 Credits)

ENG 111	English Composition	3
IVY 1XX	Life Skills Elective	1
MAT 1XX	Intermediate Algebra or Higher	3

Professional/Technical (3 credits)

| CIS 102 | Information Systems Fundamentals | 3 |

Concentration (6 credits)

| CIS 113 | Logic, Design and Programming | 3 |
| CIS 106 | Microcomputer Operating Systems | 3 |

Locally Determined Courses (15 credits)

CIS XXX	CIS Course Elective	12
CIS XXX or	CIS Course Elective	3
CIT XXX	CIT Course Elective	3

Certificate

Database (27 credits)

CIS 101	Introduction to Microcomputers	3
CIS 102	Information Systems Fundamentals	3
CIS 113	Logic, Design and Programming	3
CIS 125	Database Design and Management	3
CIS 131	Structured Query Language	3
CIS 137	Visual Basic Programming	3
CIS 205	Database Design	3
CIS 225	Advanced Database Management Systems	3
CIS 237	Advanced Visual Basic Programming	3

Computer Information continued

Java (21 credits)

CIS 101	Introduction to Microcomputers	3
CIS 102	Information Systems Fundamentals	3
CIS 113	Logic, Design and Programming	3
CIS 125	Database Design and Management	3
CIS 136	Introduction to Java Programming	3
CIS 157	Web Site Development	3
CIS 236	Advanced Java Programming	3

Visual Programming (21 credits)

CIS 101	Introduction to Microcomputers	3
CIS 102	Information Systems Fundamentals	3
CIS 113	Logic, Design and Programming	3
CIS 121	C-C++ -C# Programming	3
CIS 125	Database Design and Management	3
CIS 137	Visual Basic Programming	3
CIS 237	Advanced Visual Basic Programming	3

Web Management (27 credits)

CIS 101	Introduction to Microcomputers	3
CIS 102	Information Systems Fundamentals	3
CIS 125	Database Design and Management	3
CIS 157	Web Site Development	3
CIS 257	Advanced Web Site Development	3
CIS 259	Web Administration	3
CIT 106	Microcomputer Operating Systems	3
CIT 121	Network Fundamentals	3
CIT 201	Advanced Operating Systems: Linux	3

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Computer Information Technology

Program Description

IT careers are in abundance and the Computer Information Technology program will prepare you to get the career you want. You will develop skills in network management, network security, computer hardware support and operating system administration. You will be prepared to provide technical support to computer users, including hardware, network and operating system support

Sample Careers
Computer support specialist

Degrees Available
Associate of Applied Science, Technical Certificate

Certificates Offered
Network Administrator, PC Support and Administration Routing and Switching, Systems Security

Concentrations Offered
Computer Security, Network, PC Support and Administration Student Directed Studies

Availability of concentrations and degrees varies by campus. Contact your local campus for more information. See page 8 for contact information.

Associate of Applied Science

To earn this degree, you must have 62-65 credits in the following areas:

General Education Core	19
Professional/Technical Core	28
Concentration Courses	12-16
Locally Determined Courses	3

General Education (19 Credits)

COM 101	Fundamentals of Public Speaking	3
ECN XXX	Economics Elective	3
ENG 111	English Composition	3
IVY 1XX	Life Skills Elective	1
MAT 1XX	Intermediate Algebra or Higher	3
XXX XXX	Life/Physical Science Elective	3
XXX XXX	Social Science Elective	3

Professional/Technical (28 credits)
(CIS 101 Competencies must be demonstrated by assessment or successful completion of CIS 101)

CIS 113	Logic, Design and Programming	3
CIS 203	Systems Analysis and Design	3
CIT 106	Microcomputer Operating Systems	3
CIT 121	Network Fundamentals	3
CIT 201	Advanced Operating Systems: LINUX	3
CIT 210	PC Technology Essentials	3
CIT 211	IT Technician	3
CIT 225	Windows Network Operating Systems	3
CIT 251	Introduction to Systems Security	3
CIT 279	Capstone Class	1

Choose One of the Following Concentrations

Computer Security Concentration (15 credits)
This concentration focuses on developing in-depth knowledge and technical skills related to network and information security.

Four courses from the list:

CIT 252	Routers and Firewalls	3
CIT 253	Microsoft Network Security	3
CIT 254	Linux Network Security	3

CIT 2XX	CIT Elective	3
ECT 102	Introduction to Electronics and Projects	3
	Locally Determined Courses	3

Network Concentration (15-19 credits)
This concentration focuses on developing in-depth knowledge and technical skills related to creating and maintaining computer network systems.

Four courses from the list:

CIT 125	Windows Client Operating System	3
CIT 130	CCNA 1: Networking Basics	4
CIT 131	CCNA 2: Routers and Routing Basics	4
CIT 135	Novell Administration I	3
CIT 136	Novell Advanced Administration	3
CIT 226	Implementing & Administering a Windows Network Infrastructure	3
CIT 227	Managing a Windows Network 3	3
CIT 228	Administering Windows Directory Services	3
CIT 230	CCNA 3: Switching Basics and Intermediate Routing 4	
CIT 231	CCNA 4: WAN Technologies	4
CIT 235	Networking Technology Concepts	3
CIT 236	Novell Hardware Service and Support	3
CIT 237	Novell Administration III	3
CIT 25X	Security Elective (maximum 3 credit hours)	3
	Locally Determined Courses	3

PC Support and Administration Concentration
(15 credits)
This concentration focuses on developing in-depth knowledge and technical skills related to assisting computer users with software, hardware and network needs.

Four courses from the list:

CIS 125	Database Design and Management	3
CIS 151	Integrated Business Software	3
CIS 157	Web Site Development	3
CIS 206	Project Development with High-Level Tools	3
CIT 109	UNIX Operating Systems	3
CIT 120	Data Communications	3
CIT XXX	CIT Elective (maximum 3 credit hours)	3
ELT 120	Introduction to Electronics	3
	Locally Determined Courses	3

The student directed studies concentration allows students to select elective courses from a wide list of options, focusing on specific areas of interest.

Student Directed Studies Concentration (15 credits)

ACC XXX	Accounting Elective	0-12
BUS XXX	Business Elective	0-12
CIS XXX	Computer Information Systems Elective	0-12
CIT XXX	Computer Information Technology Elective	0-12
ELT XXX	Electronics Elective	0-12
ENG 211	Technical Writing	0-3
MIT XXX	Manufacturing and Industrial Technology Elective	0-12
OAD XXX	Office Administration Elective	0-12
VIS XXX	Visual Communications Elective	0-12
	Locally Determined Courses	3

Technical Certificate

To earn this degree, you must have 31 credits in the following areas:

General Education Core	7
Professional/Technical Core	3
Other Required Courses	6
Locally Determined Courses	15

General Education (7 Credits)

ENG 111	English Composition	3
IVY 1XX	Life Skills Elective	1
MAT 1XX	Intermediate Algebra or Higher	3

Professional/Technical (3 credits)

CIT 106	Microcomputer Operating Systems	3

Concentration (6 credits)

CIT 121	Network Fundamentals	3
CIT 225	Windows Network Operating Systems	3

Locally Determined Courses (15 credits)

CIS XXX	CIS Course Elective	3
or		
CIT XXX	CIT Course Elective	3
CIT XXX	CIT Course Electives	12

Certificate

Network Administration (21 credits)

CIS 101	Introduction to Microcomputers	3
CIT 106	Microcomputer Operating Systems	3
CIT 121	Network Fundamentals	3
CIT 125	Windows Client Operating System	3
CIT 225	Windows Network Operating Systems	3
CIT 227	Managing a Windows Network	3
CIT 251	Introduction to Systems Security	3

PC Support and Administration (21 credits)

CIS 101	Introduction to Microcomputers	3
CIT 106	Microcomputer Operating Systems	3
CIT 121	Network Fundamentals	3
CIT 125	Windows Client Operating System	3
CIT 201	Advanced Operating Systems: Linux	3
CIT 210	PC Technology Essentials	3
CIT 211	IT Technician	3

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Routing and Switching (16 credits)

CIT 130	CISCO 1 Networking Basics	4
CIT 131	CISCO 2 Routers and Routing Basics	4
CIT 230	CISCO 3 Switching Basics and Intermediate Routing	4
CIT 231	CISCO 4 Wide Area Network Technologies	4

Systems Security (27 credits)

CIS 101	Introduction to Microcomputers	3
CIT 106	Microcomputer Operating Systems	3
CIT 121	Network Fundamentals	3
CIT 201	Advanced Operating Systems: Linux	3
CIT 225	Windows Network Operating Systems	3
CIT 251	Introduction to Systems Security	3
CIT 252	Routers and Firewalls	3
CIT 253	Microsoft Network Security	3
CIT 254	Linux Networking Security	3

Construction Technology

Program Description

The construction industry has placed new demands on the building industry. There is a need for employees skilled in estimating, writing specifications for building plans, layout and assembly of residential steel framing, and building restoration and renovation.

This program will give you the knowledge and skills necessary for job success either as a self-employed business person, or as an employee in home improvement centers, plumbing and electrical contractor, carpentry trades, or many other phases within the construction industry.

Sample Careers

HVAC Technician, carpenter, electrical installer

Degrees Available

Associate of Applied Science, Technical Certificate

Certificates Offered

Construction Technician

Concentrations Offered

Architectural, Cabinetry, Electrical, Heating, Ventilation, and Air Conditioning, Interior Planning and Design, Landscape Technology, Residential and Light Carpentry

Availability of concentrations and degrees varies by campus. Contact your local campus for more information. See page 8 for contact information.

Associate of Applied Science

To earn this degree, you must have 62 credits in the following areas:

General Education Core	20
Professional/Technical Core	18
Concentration Courses	12
Locally Determined Courses	12

General Education (20 Credits)

COM 101	Fundamentals of Public Speaking	3
ENG 111	English Composition	3
IVY 1XX	Life Skills Elective	1
MAT 1XX	Intermediate Algebra or higher	3
MAT 121	Geometry/Trigonometry	3
** PHY 100	Technical Physics	4
or		
** PHY 101	Physics I	4
* XXX XXX	Humanities/Social Sciences Elective	3

Professional/Technical (18 credits)

CON 101	Introduction to Construction Technology	3
CON 102	Construction Materials	3
CON 106	Construction Blueprint Reading	3
CON 127	Electrical Basics	3
^ CON 204	Estimating and Specifications	3
TEC 104	Computer Fundamentals for Technology	3

Choose One of the Following Concentrations

Architectural Concentration (24 credits)

Get prepared for a career in an architect's office. This coursework includes drafting, residential construction materials, commercial construction materials, geometry, technical math, production drawing, light, medium, and heavy construction drafting.

Four courses from the list:

DSN 105	Architectural Design I	3
DSN 108	Residential Design	3
DSN 204	Architectural Design II	3
DSN 208	Structural Design and Detailing	3
Locally Determined Courses		12

Cabinetry Concentration (24 credits)

The cabinetry concentration places an emphasis on woodworking, design and installation. You will learn to build and install cabinetry and also be able to assist clients in selecting and designing residential and commercial cabinetry.

BCT 120	Woodworking Fundamentals	3
BCT 121	Furniture Design and Construction	3
BCT 122	Woodworking Jig Layout	3
BCT 126	Furniture Door and Drawer Assembly	3
Locally Determined Courses		12

Electrical Concentration (24 credits)

This concentration can provide you with the knowledge and skills necessary to gain employment as an electrical technician, installer or service provider. The focus of this program is residential and light commercial installation, troubleshooting and maintenance.

BCT 201	Residential Wiring	3
BCT 213	Motor and Motor Controls	3
BCT 220	Electrical Troubleshooting Techniques	3
BCT 222	Commercial/Industrial Wiring	3
Locally Determined Courses		12

Heating, Ventilation, and Air Conditioning Concentration (24 credits)

This concentration provides theory and laboratory work in heating, ventilation, and air conditioning (HVAC). As a technician, you'll be prepared for employment in a variety of areas, including: designing HVAC systems for residential, commercial, and industrial applications.

HEA 101	Heating Fundamentals	3
HEA 103	Refrigeration I	3
HEA 104	Heating Service	3
HEA 106	Refrigeration II	3
Locally Determined Courses		12

Interior Planning and Design Concentration (24 credits)

Do you have an eye for interior design? This concentration, which focuses on textiles, layout and design, will prepare you to assist in selection of textiles, as well as the layout and design of residential and commercial interiors.

EDN 216	CAD for Environmental Designers	3
INT 103	Introduction to Interior Design	3
INT 104	Textiles for Interiors	3

| INT 211 | Kitchen and Bath Design | 3 |
| | Locally Determined Courses | 12 |

Landscape Technology Concentration (24 credits)
This concentration is designed to provide a depth of understanding and skill in the technical requirements for work in any of the many areas of employment in the "green industry." The curriculum is planned to prepare a student for positions in residential or commercial landscape construction and management, golf course, park and cemetery maintenance.

LND 101	Landscape Trees	3
LND 102	Shrubs and Other Plants	3
LND 103	Landscape Management I	3
LND 104	Turf Management I	3
	Locally Determined Courses	12

Residential and Light Carpentry Concentration
(24 credits)
The Residential and Light Carpentry Specialty can provide you with the knowledge and skills you need for employment as a carpenter. You will study residential and commercial construction. All phases will be explored and applied on a job site or in the lab.

BCT 104	Floor and Wall Layout and Construction	3
BCT 105	Roof Construction	3
BCT 114	Exterior Trim	3
BCT 221	Interior Trim	3
	Locally Determined Courses	12

Technical Certificate
To earn this degree, you must have 31-37 credits in the following areas:

General Education Cor	7
Professional/Technical Core	3
Concentration Courses	6-9
Locally Determined Courses	15-18

General Education (7 Credits)

**	COM 101 Fundamentals of Public Speaking	3
	or	
**	ENG 111 English Composition	3

| | IVY 1XX | Life Skills Elective | 1 |
| * | XXX XXX | Math/Social Sciences/Humanities/Life/ Physical Sciences Elective | 3 |

Professional/Technical (3 credits)

| CON 101 | Introduction to Construction Technology | 3 |

Choose One of the Following Concentrations
Architectural Concentration (24 credits)

DSN 105	Architectural Design I	3
DSN 204	Architectural Design II	3
	Locally Determined Courses	18

Electrical Concentration (24 credits)

BCT 201	Residential Wiring	3
CON 127	Electrical Basics	3
	Locally Determined Courses	18

Heating, Ventilation, and Air Conditioning Concentration (24 credits)

HEA 101	Heating Fundamentals	3
HEA 103	Refrigeration I	3
	Locally Determined Courses	18

Landscape Technology Concentration (24 credits)

LND 101	Landscape Trees	3
LND 102	Shrubs and Other Plants	3
LND 103	Landscape Management I	3
	Locally Determined Courses	15

Residential and Light Carpentry Concentration
(24 credits)

BCT 104	Floor and Wall Layout and Construction	3
BCT 105	Roof Construction	3
	Locally Determined Courses	18

Certificate

Construction Technician (21 credits)

| BCT 104 | Floor and Wall Layout and Construction | 3 |

BCT 105	Roof Construction	3
BCT 114	Exterior Trim	3
BCT 221	Furniture Design and Construction	3
CON 101	Introduction to Construction Technology	3
CON 106	Construction Blueprint Reading	3
CON 127	Electrical Basics	3

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Criminal Justice

Program Description

If you are looking for an opportunity for public service in a challenging job that involves personal responsibility, you may find success in the criminal justice field. Knowledge of sociology, psychology, government and law is helpful in preparing for this career.

Sample Careers

Corrections officer, law enforcement officer

Degrees Available

Associate of Science, Associate of Applied Science

Concentrations Offered

Corrections, Law Enforcement, Youth Services

Availability of concentrations and degrees varies by campus. Contact your local campus for more information. See page 8 for contact information.

Associate of Science

Articulated transfer through an Associate of Science in Criminal Justice is available with Indiana State University, Indiana University and IU-South Bend. To view these Associate of Science transfer degree programs and to see if they are available at your local Ivy Tech campus, students should go to *http://www.ivytech.edu/*.

Students are encouraged to review these options with their advisors, to consult the current catalog of the institution to which they wish to transfer, and to contact the institution to which they wish to transfer. Additional opportunities for course and program transfer may also be available at your local campus. Students should contact the transfer office of their local Ivy Tech for further information.

Associate of Applied Science

To earn this degree, you must have 61-62 credits in the following areas:

General Education Core	19
Professional/Technical Core	27
Concentration Courses	12
Locally Determined Courses	3-4

General Education (19 Credits)

COM 101	Fundamentals of Public Speaking or	3
COM 102	Introduction to Interpersonal Communication	3
ENG 111	English Composition	3
IVY 1XX	Life Skills Elective	1
* MAT 1XX	Mathematics Elective	3
POL 101	Introduction to American Government and Politics	3
PSY 101	Introduction to Psychology or	3
SOC 111	Introduction to Sociology	3
* XXX XXX	Humanities Elective	
* XXX XXX	Life/Physical Science Elective	3

Professional/Technical (27 credits)

CRJ 101	Introduction to Criminal Justice Systems	3
CRJ 103	Cultural Awareness	3
CRJ 105	Introduction to Criminology	3
CRJ 110	Introduction to Law Enforcement	3
CRJ 120	Introduction to Courts	3
CRJ 130	Introduction to Corrections	3
CRJ 201	Ethics in Criminal Justice	3
CRJ 240	Criminal Law and Procedure	3
^ CRJ 260	Criminal Justice Research	3

Associate of Applied Science – Concentrations

Choose One of the Following Concentrations

Corrections Concentration (15-16 credits)
Vigorous law enforcement and stringent sentencing rules have increased the number of people being held for trial or imprisoned for their crimes in the last decade. Corrections officers monitor people being detained for trial and those who have been imprisoned.

CRJ 230	Community-Based Corrections	3
CRJ 231	Special Issues in Corrections	3
CRJ 246	Legal Issues in Corrections	3
XXX XXX	Program Elective	3
	Locally Determined Courses:	
CRJ 280	Internship or	4
CRJ XXX	Criminal Justice elective	3

Law Enforcement Concentration (15-16 credits)
Law enforcement officials provide assistance, respond to emergency calls, investigate crime scenes, and testify in court. This concentration places emphasis on developing the skills needed to be a police officer, including law, community relations, procedural law and criminal investigations.

CRJ 113	Criminal Investigations	3
CRJ 210	Police and Community Relations	3
CRJ 220	Criminal Evidence	3
CRJ XXX	Program Elective	3
	Locally Determined Courses:	
CRJ 280	Internship or	4
CRJ XXX	Criminal Justice elective	3

Dental Assisting

Program Description

The dental assistant is an integral part of the dental health care team. Dental assistants prepare a patient for an exam; pass instruments to the doctor; prepare dental materials; expose and develop X-rays; teach preventative dental care; sterilize instruments; and / or perform dental receptionist duties. You could be instrumental in helping a patient be less anxious about having a dental check up. You could help a child understand why brushing their teeth is important.
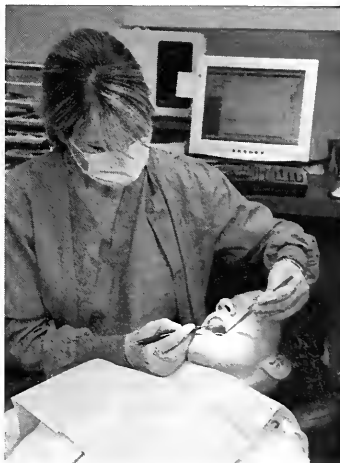
Sample Careers
Dental assistant

Degrees Available
Technical Certificate

Concentrations Offered
None

Technical Certificate

To earn this degree, you must have 39 credits in the following areas:

General Education Core	7
Professional/Technical Core	33

General Education (7 Credits)

COM 102	Introduction to Interpersonal Communication	3
ENG 111	English Composition	3
IVY 1XX	Life Skills Elective	1

Professional/Technical (33 credits)

DEN 102	Dental Materials and Laboratory I	3
DEN 115	Preclinical Practice I	4
DEN 116	Dental Emergencies/Pharmacology	2
DEN 117	Dental Office Management	2
DEN 118	Dental Radiography	4
DEN 122	Clinical Practicum I	1
DEN 123	Dental Anatomy	2
DEN 124	Preventive Dentistry/Diet and Nutrition	2
DEN 125	Preclinical Practice II	3
DEN 129	Dental Materials and Laboratory II	3
DEN 130	Clinical Practicum II	5
DEN 131	Basic Integrated Science	2

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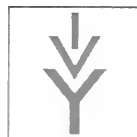
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Design Technology

Program Description

Look around your surroundings and consider the opportunities. Consider your favorite hobbies, toys, and necessities. It all had to be designed. Do you want to know the secrets of good design? The Design Technology Program will show you how you can become a valuable member of a process engineering team. You'll learn how to design solutions for modifying new or existing buildings, developing innovative commercial products, creating compelling animations and technical brochures, or carving complex machine parts from simple blocks of wood. Choose from one of four specialties—Architectural, Mechanical, Graphics or CAD-CAM—and you'll be on your way to an exciting career in an in-demand field.

Sample Careers

Designer, drafter, graphic designer, surveyor

Degrees Available

Associate of Science, Associate of Applied Science
Technical Certificate

Concentrations Offered

Architecture, Civil, CAD-CAM, Computer Graphics, Mechanical

Availability of concentrations and degrees varies by campus. Contact your local campus for more information. See page 8 for contact information.
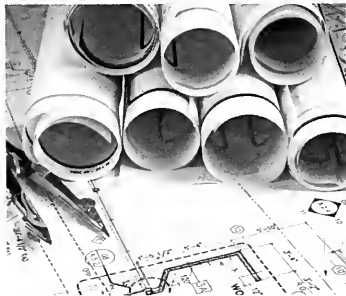
Associate of Science

Articulated transfer through an Associate of Science in Design Technology is available with Indiana State University and Purdue Calumet. To view these Associate of Science transfer degree programs and to see if they are available at your local Ivy Tech campus, students should go to *http://www.ivytech.edu/*.

Students are encouraged to review these options with their advisors, to consult the current catalog of the institution to which they wish to transfer, and to contact the institution to which they wish to transfer. Additional opportunities for course and program transfer may also be available at your local campus. Students should contact the transfer office of their local Ivy Tech for further information.

Associate of Applied Science

To earn this degree, you must have 62-65 credits in the following areas:

General Education Core	20
Professional/Technical Core	18
Concentration Courses	12
Locally Determined Courses	12

General Education (20 Credits)

COM 101	Fundamentals of Public Speaking	3
ENG 111	English Composition	3
IVY 1XX	Life Skills Elective	1
** MAT 111	Intermediate Algebra	3
and		
** MAT 121	Geometry/Trigonometry	3
or		
** MAT 131	Algebra/Trigonometry I	3
and		
** MAT 132	Algebra/Trigonometry II	3
or		
** MAT 133	College Algebra	4
and		
** MAT 134	Trigonometry	2
or		
** MAT 136	College Algebra	3
and		
** MAT 137	Trigonometry with Analytic Geometry	3
PHY 101	Physics I	4
* XXX XXX	Humanities/Social Sciences Elective	3

Professional/Technical (18 credits)

DSN 102	Technical Graphics	3
DSN 103	CAD Fundamentals	3
DSN 106	Descriptive Geometry	3
DSN 220	Advanced CAD	3
DSN 221	Statics	3
DSN 225	Portfolio Preparation	3

Choose One of the Following Concentrations

Architecture Concentration (24 credits)

Everyone enjoys attractively designed residential areas, public parks, and playgrounds, college campuses, shopping centers, golf courses, parkways, and industrial parks. Architects help design these areas so that they are not only functional but beautiful and compatible with the environment as well.

DSN 105	Architectural Design I	3
DSN 109	Construction Materials and Specifications	3
DSN 204	Architectural Design II	3
∧ DSN 208	Structural Design and Detailing	3
Locally	Determined Courses	12

Civil Concentration (24 credits)

The civil concentration places emphasis on construction materials, structural design and surveying. You will be prepared for employment with civil engineering firms, construction firms, surveying firms and highway departments.

DSN 109	Construction Materials and Specifications	3
∧ DSN 208	Structural Design and Detailing	3
DSN 210	Surveying	3
DSN 213	CAD Mapping	3
	Locally Determined Courses	12

Computer-Aided Design and Manufacturing Concentration (24 credits)

Manufacturing or CAD/CAM design technologists translate engineers' and designers' ideas into graphic form. This places emphasis on using CNC programming, and CAD/CAM technology in design and manufacturing applications.

MTT 208	CNC Programming I	3
MTT 220	CAD/CAM I	3
∧ MTT 221	CAD/CAM II	3
TEC 101	Processes and Materials	3
	Locally Determined Courses	12

Computer Graphics Concentration (24 credits)

This new concentration combines Technical Drawing and Fine Arts Drawing. You will be prepared to find employment as graphic illustrators and commercial artists who design parts catalogs, magazine and newspaper advertising, as well as entry level animation used in movie production.

DSN 130	Fundamentals of Computer Graphis	3
DSN 132	Raster Imagine Fundamentals	3
DSN 133	Vector Imaging Fundamentals	3
DSN 230	Computer Modeling and Animation	3
Locally Determined Courses		12

Mechanical Concentration (24 credits)

Mechanical disciplines work in many industries that vary by industry and function. Some specialties include applied mechanics, computer-aided-design and manufacturing; energy systems; material handling systems; pressure vessel and piping systems; heating, refrigeration and air condition systems.

DSN 104	Mechanical Graphics	3
DSN 214	Kinematics of Machinery	3
^ DSN 217	Design Process and Applications	3
TEC 101	Processes and Materials	3
Locally Determined Courses		12

Associate of Applied Science via Distance Education

To earn this degree, you must have 62-63 credits in the following areas:

General Education Core	20-21
Professional/Technical Core	42

Architectural Concentration (62-63 Credits)
General Education (20-21 Credits)

COM 101	Fundamentals of Public Speaking	3
ENG 111	English Composition	3
IVY 1XX	Life Skills Elective	1
MAT 111	Intermediate Algebra	3
MAT 121	Geometry/Trigonometry	3
PHY 101	Physics I	4
XXX XXX	Humanities/Social Sciences Elective	3 – 4

Professional/Technical Core (42 credits)

DSN 102	Technical Graphics	3
DSN 103	CAD Fundamentals	3
DSN 105	Architectural Design I	3
DSN 106	Descriptive Geometry	3
DSN 109	Construction Materials and Specifications	3
DSN 204	Architectural Design II	3
^ DSN 208	Structural Design and Detailing	3
DSN 220	Advanced CAD	3
DSN 221	Statics	3
DSN 222	Strength of Materials	3
DSN 225	Portfolio Preparation	3

Choose 3 courses from the list below:

DSN 108	Residential Design	3
DSN 206	Mechanical and Electrical Equipment	3
DSN 209	Estimating	3
DSN 210	Surveying	3
DSN 213	CAD Mapping	3
DSN 228	Civil I	3
DSN 280	Co-Op/Internship	3
MIT 113	Basic Electricity	3
TEC 104	Computer Fundamentals for Technology	3

Civil Concentration (62-63 Credits)
General Education (20-21 Credits)

COM 101	Fundamentals of Public Speaking	3
ENG 111	English Composition	3
IVY 1XX	Life Skills Elective	1
MAT 111	Intermediate Algebra	3
MAT 121	Geometry/Trigonometry	3
PHY 101	Physics I	4
XXX XXX	Humanities/Social Sciences Elective	3 – 4

Professional/Technical Core (42 credits)

DSN 102	Technical Graphics	3
DSN 103	CAD Fundamentals	3
DSN 106	Descriptive Geometry	3
DSN 109	Construction Materials and Specifications	3
^ DSN 208	Structural Design and Detailing	3
DSN 210	Surveying	3
DSN 213	CAD Mapping	3
DSN 220	Advanced CAD	3
DSN 221	Statics	3
DSN 222	Strength of Materials	3
DSN 225	Portfolio Preparation	3

Choose 3 courses from the list below:

DSN 105	Architectural Design I	3
DSN 108	Residential Design	3
DSN 110	Architectural Rendering	3
DSN 204	Architectural Design II	3
DSN 206	Mechanical and Electrical Equipment	3
DSN 209	Estimating	3
DSN 228	Civil I	3
DSN 280	Co-Op/Internship	3
TEC 104	Computer Fundamentals for Technology	3

Computer-Aided Design and Manufacturing Concentration (62-63 Credits)
General Education (20-21 Credits)

COM 101	Fundamentals of Public Speaking	3
ENG 111	English Composition	3
IVY 1XX	Life Skills Elective	1
MAT 111	Intermediate Algebra	3
MAT 121	Geometry/Trigonometry	3
PHY 101	Physics I	4
XXX XXX	Humanities/Social Sciences Elective	3 – 4

Professional/Technical Core (42 credits)

DSN 102	Technical Graphics	3
DSN 103	CAD Fundamentals	3
DSN 106	Descriptive Geometry	3
DSN 220	Advanced CAD	3
DSN 221	Statics	3
DSN 222	Strength of Materials	3
DSN 225	Portfolio Preparation	3
MTT 208	CNC Programming I	3
MTT 220	CAD/CAM I	3
^ MTT 221	CAD/CAM II	3
TEC 101	Processes and Materials	3

Choose 3 courses from the list below:

DSN 104	Mechanical Graphics	3
DSN 202	CAD Customization and Programming	3
DSN 214	Kinematics of Machinery	3
DSN 217	Design Process and Applications	3
DSN 227	Geometric Dimensioning and Tolerancing	3
DSN 280	Co-Op/Internship	3
MIT 104	Fluid Power Basics	3
MIT 113	Basic Electricity	3
TEC 104	Computer Fundamentals for Technology	3

Mechanical Concentration (62-63 Credits)
General Education (20-21 Credits)

COM 101	Fundamentals of Public Speaking	3
ENG 111	English Composition	3
IVY 1XX	Life Skills Elective	1
MAT 111	Intermediate Algebra	3
MAT 121	Geometry/Trigonometry	3
PHY 101	Physics I	4
XXX XXX	Humanities/Social Sciences Elective	3 – 4

Professional/Technical Core (42 credits)

	DSN 102	Technical Graphics	3
	DSN 103	CAD Fundamentals	3
	DSN 104	Mechanical Graphics	3
	DSN 106	Descriptive Geometry	3
	DSN 214	Kinematics of Machinery	3
^	DSN 217	Design Process and Applications	3
	DSN 220	Advanced CAD	3
	DSN 221	Statics	3
	DSN 222	Strength of Materials	3
	DSN 225	Portfolio Preparation	3
	TEC 101	Processes and Materials	3

Choose 3 courses from the list below:

DSN 202	CAD Customization and Programming	3
DSN 206	Mechanical and Electrical Equipment	3
DSN 227	Geometric Dimensioning and Tolerancing	3
DSN 280	Co-Op/Internship	3
MIT 104	Fluid Power Basics	3
MIT 113	Basic Electricity	3

MTT 208	CNC Programming I	3
MTT 220	CAD/CAM I	3
TEC 104	Computer Fundamentals for Technology	3

Technical Certificate

To earn this degree, you must have 31-32 credits in the following areas:

General Education Core	7-8
Professional/Technical Core	3
Concentration Courses	6
Locally Determined Courses	15

General Education (7-8 Credits)

ENG 111	English Composition	3
IVY 1XX	Life Skills Elective	1
** XXX XXX	General Education Elective	3-4

Professional/Technical (3 credits)

DSN 102	Technical Graphics	3

Other Required Courses (21 credits)

DSN 103	CAD Fundamentals	3
DSN 106	Descriptive Geometry	3
Locally Determined Courses		15
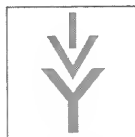
IVY TECH
COMMUNITY
COLLEGE

Early Childhood Education

Program Description

The Early Childhood Education Program focuses on early child growth and development including adult-child relationships. Emphasis is placed on the development of skills and techniques for providing appropriate environments and care for young children. Instruction is provided in the physical, emotional, social, and cognitive areas of early childhood. The student develops competencies through classroom instruction, observation, and participation in early education and care settings.

Sample Careers

Work in settings such as child care, nursery school, Head Start, family child care, pediatrics, nanny care, infant/toddler care, resource and referral services.

Degrees Available

Associate of Science, Associate of Applied Science
Technical Certificate

Concentrations Offered

None

Availability of concentrations and degrees varies by campus. Contact your local campus for more information. See page 8 for contact information.

Associate of Science

Articulated transfer through an Associate of Science in Early Childhood Education is available with Ball State University, IU Kokomo, IPFW, IUPUI, Anderson University, Indiana State University, and the University of Southern Indiana. To view these Associate of Science transfer degree programs and to see if they are available at your local Ivy Tech campus, students should go to *http://www.ivytech.edu/*.

Students are encouraged to review these options with their advisors, to consult the current catalog of the institution to which they wish to transfer, and to contact the institution to which they wish to transfer. Additional opportunities for course and program transfer may also be available at your local campus. Students should contact the transfer office of their local Ivy Tech for further information.

Associate of Applied Science

To earn this degree, you must have 67-68 credits in the following areas:

General Education Core	19-20
Professional/Technical Core	39
Locally Determined Courses	9

General Education (19-20 Credits)

IVY 1XX	Life Skills Elective	1
ENG 111	English Composition	3
* COM 101	Fundamentals of Public Speaking	3
or		
* COM 102	Introduction to Interpersonal Communication	3
* MAT 1XX	Intermediate Algebra or Higher	3
SOC 111	Introduction to Sociology	3
* XXX XXX	Life/Physical Science Elective	3
* XXX XXX	Humanities Elective	3-4

Professional/Technical (48 credits)

ECE 100	Introduction to Early Childhood Education	3
ECE 101	Health, Safety and Nutrition	3
ECE 103	Curriculum in the Early Childhood Classroom	3
ECE 120	Child Growth and Development	3
ECE 130	Developmentally Appropriate Guidance in a Cultural Context	3
ECE 204	Families in Transition	3
ECE 210	Early Childhood Administration	3
ECE 230	The Exceptional Child	3
ECE 233	Emerging Literacy	3
ECE 243	Cognitive Curriculum	3
^ ECE 260	Early Childhood Professional	3

Choose two of the following:

ECE 105	CDA Process	3
or		
ECE 115	Indiana Youth Development (IYD) Process	3
ECE 205	Early Care Practicum	3
ECE 225	Infant and Toddler Practicum	3
ECE 235	Preschool Practicum	3
ECE 245	School Age Practicum	3
ECE 255	Generalist Practicum	3
Locally Determined Courses		9

Technical Certificate

To earn this degree, you must have 31 credits in the following areas:

General Education Core	7
Professional/Technical Core	15
Locally Determined Courses	9

General Education (7 Credits)

ENG 111	English Composition	3
IVY 1XX	Life Skills Elective	1
** SOC 111	Introduction to Sociology	3

Professional/Technical (24 credits)

ECE 100	Introduction to Early Childhood Education	3
ECE 101	Health, Safety and Nutrition	3
ECE 103	Curriculum in the Early Childhood Classroom	3
ECE 120	Child Growth and Development	3

Choose one of the following:

ECE 105	CDA Process	3
or		
ECE 115	Indiana Youth Development (IYD) Process	3
ECE 205	Early Care Practicum	3

ECE 225	Infant and Toddler Practicum	3
ECE 235	Preschool Practicum	3
ECE 245	School Age Practicum	3
ECE 255	Generalist Practicum	3
Locally Determined Courses		9

IVY TECH
COMMUNITY COLLEGE

Education

Program Description

With an Associate of Science degree in education, you will acquire knowledge of the teaching profession as well as a strong background in general education subjects required of teachers. You will be well prepared if you choose to transfer your degree to a bachelor's degree program in education.

By completing a core of educational foundation courses, general education requirements, and the Praxis I exam, you will be ready to enter baccalaureate degree programs as a junior ready to pursue your bachelor's degree in education.

Articulated transfer opportunities are available with the public four-year universities in Indiana. Additional opportunities for courses and program transfer may also be available. You should contact the transfer office of your local Ivy Tech for additional information.

Sample Careers
Substitute teacher, teacher assistant, transfer degree

Degrees Available
Associate of Science

Concentrations Offered
None

Availability of concentrations and degrees varies by campus. Contact your local campus for more information. See page 8 for contact information.

Electronics & Computer Technology

Program Description

The Electronics and Computer Technology program is structured to prepare you with the technical skills, general knowledge and critical thinking and problem-solving skills necessary to pursue a career and adapt to changes in the fields of computer and electronics systems in such industries as telecommunications, medicine, electrical service, industry, instrumentation and others using this type of technology.

Sample Careers
Engineering technician

Degrees Available
Associate of Science, Associate of Applied Science

Concentrations Offered
None

Availability of concentrations and degrees varies by campus. Contact your local campus for more information. See page 8 for contact information.

Associate of Science

Articulated transfer through an Associate of Science in Electronics Technology is available with Indiana State University, IUPU-Fort Wayne, and the University of Southern Indiana. To view these Associate of Science transfer degree programs and to see if they are available at your local Ivy Tech campus, students should go to the Academic Options/Curricula section of *http://www.ivytech.edu/*. Click on Electronics Technology and then on the Associate of Science curricula. Students are encouraged to review these options with their advisors, to consult the current catalog of the institution to which they wish to transfer, and to contact the institution to which they wish to transfer. Additional opportunities for course and program transfer may also be available at your local campus. Students should contact the transfer office of their local Ivy Tech for further information.

Associate of Applied Science

To earn this degree, you must have 63 credits in the following areas:

General Education Core	20
Professional/Technical Core	31
Locally Determined Courses	12

General Education (20 Credits)

COM 101	Fundamentals of Public Speaking	3
ENG 111	English Composition	3
IVY 1XX	Life Skills Elective	1
MAT 1XX	First Course in a Series	3
MAT 1XX	Second Course in a Series	3
PHY 101	Physics I	4
XXX XXX	Humanities/Social Sciences Elective	3

Professional/Technical (43 credits)

ECT 101	Introduction to Electronics and Projects	3
ECT 111	Introduction to Circuit Analysis	4
ECT 112	Digital Fundamentals	3
ECT 121	Electronics Circuit Analysis	4
ECT 122	Digital Applications	4
ECT 128	Introduction to C Programming	3
ECT 211	AC Electronics Circuit Analysis	4
ECT 222	Introduction to Microcontrollers	3
^ ECT 279	Advanced Problem Solving	3
	Locally Determined Courses	12

Fine Art

Program Description
The art/design/fashion industry captures the creative individual. Earn an associate degree in fine arts and cultivate your artistic skills- whether it is in fine arts, commercial art, film, fashion, or photography. Artists make careers everywhere that visual expression, flexible thinking and communication skills are in demand.

Sample Careers
Fine artists, such as painters, sculptors and illustrators

Degrees Available
Associate of Fine Arts

Concentrations Offered
None

Associate of Fine Arts
To earn this degree, you must have 61 credits in the following areas:

General Education Core	28
Concentration	33

General Education (28 Credits)

ARH 101	Survey of Art and Culture I	3
ARH 102	Survey of Art and Culture II	3
COM 101	Fundamentals of Public Speaking	3
ENG 111	English Composition	3
ENG 112	Exposition and Persuasion	3
IVY 1XX	Life Skills Elective	1
MAT 118	Concepts in Mathematics	3
PSY 101	Introduction to Psychology	3
SCI 111	Physical Science	3
SOC 111	Introduction to Sociology	3

Professional/Technical (33 credits)

ART 100	Life and Object Drawing I	3
ART 101	Life and Object Drawing II	3
ART 102	Color and Design Theory	3
ART 103	Three-Dimensional Design	3
ART 104	Contemporary Art History	3
ART 2XX	Studio Electives	15
ART 2XX	Art History Elective	3

IVY TECH
COMMUNITY COLLEGE

General Studies

Program Description
The General Studies program focuses on students taking their first two years of college at Ivy Tech and then transferring their credits to other colleges and universities both in state and out of state. General Studies' students complete a core of general education courses which include: Fundamentals of Public Speaking, English Composition, Exposition and Persuasion, Mathematics and Life and Physical Sciences. Also students select from courses which include: History, Government and Politics, Psychology, Sociology and Philosophy.

Sample Careers
The General Studies program is designed as a transfer opportunity to bachelor's degree-granting institutions.

Degrees Available
Associate of Science

Concentrations Offered
None

Availability of concentrations and degrees varies by campus. Contact your local campus for more information. See page 8 for contact information.

Health Information Technology

Program Description

Healthcare professionals strive daily to provide real-time health care delivery and aid in health-related decision making. Helping provide that commitment of quality healthcare are health information management professionals who specialize in medical records management, privacy, risk management, medical coding, insurance reimbursement, corporate compliance, data analysis and reporting. Employment possibilities include physician offices, clinics, hospitals, long-term care facilities, rehabilitation centers, and other healthcare facilities that maintain, collect, and analyze healthcare data.

This Ivy Tech associate of science degree program has the input of employers who understand the demand for trained professionals committed to the timely, accurate, and secure collection of health information.

Sample Careers

Health Services Manager, Medical Records and Health Information Technicians

Degrees Available
Associate of Science

Concentrations Offered
None

Availability of concentrations and degrees varies by campus. Contact your local campus for more information. See page 8 for contact information.

Associate of Science
To earn this degree, you must have 68 credits in the following areas:

General Education Core	25
Professional/Technical Core	43

General Education (25 Credits)

*	ANP 101	Anatomy and Physiology I	3
	ANP 102	Anatomy and Physiology II	3
*	COM 101	Fundamentals of Public Speaking	3
*	ENG 111	English Composition	3
	ENG 211	Technical Writing	3
	IVY 1XX	Life Skills Elective	1
*	MAT 115	Statistics	3
	PHL 102	Introduction to Ethics	3
	PSY 101	Introduction to Psychology or	3
	SOC 111	Introduction to Sociology	3

Professional/Technical (43 credits)

	CIS 102	Information Systems Fundamentals	3
*	HHS 101	Medical Terminology	3
	HIT 101	Health Information Systems	3
	HIT 102	Health Data Content and Structure	2
	HIT 104	Health Information and the Law	3
	HIT 105	Healthcare Organizations and Delivery Systems	3
	HIT 110	Pharmacology for Health Information Technology	2
	HIT 201	Reimbursement Systems	3
	HIT 202	Healthcare Data Literacy and Statistics	3
	HIT 203	ICD Coding	3
	HIT 204	Quality Assessment and Improvement	2
^	HIT 205	Organization and Supervision	2
	HIT 206	Pathophysiology I	3
	HIT 207	Health Information Externship I	1
	HIT 208	Health Information Externship II	1
	HIT 213	CPT Coding	3
	HIT 216	Pathophysiology II	3

*Must be successfully completed prior to being selected into the program

IVY TECH
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Hospitality Administration

Program Description

Event planning careers are for people with strong organizational and inter-personal skills, and that also enjoy the art of creating a functional and pleasant environment for customers attending an event. The hospitality administration's concentration in event management provides training in budget management, organizational skills, management skills, communication skills, and how to coordinate the activities of many diverse groups of people and suppliers.

Sample Careers

Event planner, meeting planner, convention center coordinator or director, lodging manager

Degrees Available

Associate of Science, Associate of Applied Science
Technical Certificate

Concentrations Offered

Baking & Pastry Arts, Culinary Arts, Event Management
Hotel Management, Restaurant Management

Availability of concentrations and degrees varies by campus. Contact your local campus for more information. See page 8 for contact information.

Associate of Science

Articulated transfer through an Associate of Science in Hospitality Administration is available with Ball State University. To view these Associate of Science transfer degree programs and to see if they are available at your local Ivy Tech campus, students should go to *http://www.ivytech.edu/*.

Students are encouraged to review these options with their advisors, to consult the current catalog of the institution to which they wish to transfer, and to contact the institution to which they wish to transfer. Additional opportunities for course and program transfer may also be available at your local campus. Students should contact the transfer office of their local Ivy Tech for further information

Associate of Applied Science

To earn this degree, you must have 63-69 credits in the following areas:

General Education Core	19
Professional/Technical Core	20
Concentration Courses	24-30
Locally Determined Courses	0-6

General Education (19 Credits)

**	COM 101	Fundamentals of Public Speaking	3
		or	
**	COM 102	Introduction to Interpersonal Communication	3
	ENG 111	English Composition	3
	IVY 1XX	Life Skills Elective	1
**	MAT 111	Intermediate Algebra	3
		or	
**	MAT 118	Concepts in Mathematics	3
*	XXX XXX	Life/Physical Science Elective	3
*	XXX XXX	Social/Behavioral Science Elective	3
*	XXX XXX	Humanities Elective	3

Professional/Technical (20 credits)

HOS 101	Sanitation and First Aid	3
HOS 102	Basic Food Theory and Skills	3
HOS 104	Nutrition	3
HOS 108	Human Relations Management	3
HOS 201	Purchasing - Cost Control	3
HOS 203	Menu, Design, and Layout	2
^ HOS 280	Co-op/Internship	3

Choose One of the Following Concentrations

Baking and Pastry Arts Concentration (24 credits)

Restaurants, hotels, clubs, grocery stores, commercial, and independent shops are constantly seeking bakers and pastry chefs with the necessary skills and experience. This concentration is tailored to will prepare you to satisfy industry demands and American Culinary Federation Standards for Baker certification.

HOS 105	Introduction to Baking	3
HOS 106	Pantry and Breakfast	3
HOS 111	Yeast Breads	3
HOS 113	Baking Science	3
HOS 208	Cakes, Icings, and Fillings	3
HOS 209	Advanced Decorating and Candies	3
HOS 213	Classical Pastries and Chocolates	3
HOS 270	Bakery Merchandising	3

Culinary Arts Concentration (30 credits)

Ivy Tech's excellent educational kitchen enables us to train you for entry-level positions, such as first, second or sauté cooks, sous chefs, and garde mangers. The goal is to send you into the food service industry equipped with manual, theoretical and technical competence.

HOS 103	Soup, Stock, and Sauces	3
HOS 105	Introduction to Baking	3
HOS 106	Pantry and Breakfast	3
HOS 110	Meat Fabrication	3
HOS 202	Fish and Seafood	3
HOS 207	Table Service	3
HOS 210	Classical Cuisine	3
HOS 212	Garde Manger	3
Locally Determined Courses		6

Event Management Concentration (30 credits)

Ivy Tech's excellent educational kitchen enables us to train you for entry-level positions, such as first, second or saute cooks, sous chefs, and garde mangers. The goal is to send you into the food service industry equipped with manual, theoretical and technical competence.

ACC 101	Financial Accounting	3
BUS 105	Principles of Management	3
CIS 101	Introduction to Microcomputers	3
HOS 114	Introduction to Hospitality	3
HOS 144	Travel Management	3

HOS 171	Introduction to Convention & Meeting Management	3
HOS 172	Development and Management of Attractions	3
HOS 271	Mechanics of Meeting Planning	3
HOS 272	The Tourism System	3
MKT 101	Principles of Marketing	3

Hotel Management Concentration (30 credits)
Hospitality at the basic level is simply the art of making guests feel welcome. It is the largest service industry in the nation and dramatic employment growth is expected both nationally and in Indiana. This concentration addresses your potential to become a successful manager.

	ACC 101	Financial Accounting	3
	BUS 102	Business Law	3
	BUS 105	Principles of Management	3
	CIS 101	Introduction to Microcomputers	3
	HOS 114	Introduction to Hospitality	3
*	HOS 144	Travel Management	3
	or		
*	BUS 101	Introduction to Business	3
	HOS 207	Table Service	3
	HOS 215	Front Offi ce	3
	HOS 217	Housekeeping	3
	MKT 101	Principles of Marketing	3

Restaurant Management Concentration (30 credits)
Restaurant management training provides you with great opportunities to manage a complex operation and play the lead role in creating a great experience for your customers. This concentration includes courses in hotel and restaurant management, financial management, business, sales, food and beverage purchasing.

	ACC 101	Financial Accounting	3
	BUS 101	Introduction to Business	3
	BUS 102	Business Law	3
	BUS 105	Principles of Management	3
	BUS 208	Organizational Behavior	3
	CIS 101	Introduction to Microcomputers	3
	HOS 114	Introduction to Hospitality	3
	HOS 207	Table Service	3
	MKT 101	Principles of Marketing	3
*	OPM 224	Operations Management	3
	or		
*	MKT 204	Marketing Management	3

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Technical Certificate
To earn this degree, you must have 31 credits in the following areas:

General Education Core	7
Professional/Technical Core	3
Concentration Courses	6-9
Locally Determined Courses	12-15

General Education (7 Credits)

COM 102	Introduction to Interpersonal Communication	3
or		
ENG 111	English Composition	3
IVY 1XX	Life Skills Elective	1
MAT 111	Intermediate Algebra	3
or		
MAT 118	Concepts in Mathematics	3

Professional/Technical (3 Credits)

HOS 101	Sanitation and First Aid	3

Choose One of the Following Concentrations

Baking and Pastry Arts Concentration (21 credits)

HOS 105	Introduction to Baking	3
HOS 113	Baking Science	3
HOS 270	Bakery Merchandising	3
Locally Determined Courses		12

Culinary Arts Concentration (21 credits)

HOS 102	Basic Foods Theory and Skills	3
HOS 104	Nutrition	3
Locally Determined Courses		15

IVY TECH
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Human Services

Program Description
If you're looking for a career that will allow you to help others, you may want to check out our Human Services program. It's designed to provide meaningful training for students interested in working with people. The program emphasizes the personal attitudes, technical knowledge, and practical skills necessary to obtain entry-level employment in a wide variety of social service settings. As human services paraprofessionals, graduates reach out to individuals, families and communities.

Career opportunities exist in local community mental health centers, psychiatric hospitals, group homes, substance abuse programs, government welfare agencies, correctional institutions, homeless shelters, and agencies serving the developmentally disabled.

Sample Careers
Social service worker, corrections counselor, counselor

Degrees Available
Associate of Science, Associate of Applied Science
Technical Certificate

Concentrations Offered
Correctional Rehabilitation Services, Generalist, Gerontology, Mental Health, Substance Abuse

Availability of concentrations and degrees varies by campus. Contact your local campus for more information. See page 8 for contact information.

Associate of Science

Articulated transfer through an Associate of Science in Human Services is available with Ball State University, Indiana State University, IUPU-Fort Wayne, IUPUI and the University of Southern Indiana. To view these Associate of Science transfer degree programs and to see if they are available at your local Ivy Tech campus, students should go to *http://www.ivytech.edu/*.

Students are encouraged to review these options with their advisors, to consult the current catalog of the institution to which they wish to transfer, and to contact the institution to which they wish to transfer. Additional opportunities for course and program transfer may also be available at your local campus. Students should contact the transfer office of their local Ivy Tech for further information.

Associate of Applied Science
To earn this degree, you must have 63 credits in the following areas:

General Education Core	19
Professional/Technical Core	26
Concentration Courses	12
Locally Determined Courses	6

General Education (19 Credits)

** BIO 101	Introductory Biology	3
or		
** SCI 111	Physical Science	3
COM 101	Fundamentals of Public Speaking	3
or		
COM 102	Introduction to Interpersonal Communication	3
ENG 111	English Composition	3
IVY 1XX	Life Skills Elective	1
** MAT 1XX	Mathematics Elective	3
PSY 101	Introduction to Psychology	3
SOC 111	Introduction to Sociology	3

Professional/Technical (26 credits)

CIS 101	Introduction to Microcomputers	3
HMS 101	Introduction to Human Services	3
HMS 102	Helping Relationship Techniques	3
HMS 103	Interviewing and Assessment	3
HMS 201	Internship I	4

^ HMS 202	Internship II	4
HMS 205	Behavior Modification/Choice Theory	3
HMS 206	Group Process and Skills	3

Choose One of the Following Concentrations

Correctional Rehabilitation Services Concentration
(18 credits)
This concentration prepares you to work in correctional facilities, courts, youth rehabilitation and crime prevention.

HMS 105	Introduction to Correctional Rehabilitation Services	3
HMS 113	Problems of Substance Abuse in Society	3
HMS 215	Juvenile Delinquency	3
HMS 240	Rehabilitation Process: Probation and Parole	3
Locally Determined Courses		6

Generalist Concentration (18 credits)
This concentration prepares you to find employment in a variety of settings, such as community centers, group homes, substance abuse centers, and assisted living facilities.

HMS 109	Understanding Diversity	3
HMS 113	Problems of Substance Abuse in Society	3
HMS 220	Issues and Ethics in Human Services	3
PSY 201	Lifespan Development	3
Locally Determined Courses		6

Gerontology Concentration (18 credits)
This concentration prepares you to work closely with the elderly population and their families in a variety of settings, such as nursing homes and assisted living facilities.

HMS 108	Psychology of Aging	3
HMS 120	Health and Aging	3
HMS 130	Social Aspects of Aging	3
HMS 140	Loss and Grief	3
Locally Determined Courses		6

Mental Health Concentration (18 credits)
With a mental health concentration, you may find jobs in community mental health centers, crisis centers, residential facilities for the developmentally delayed, and services for the mentally ill.

HMS 104	Crisis Intervention	3
HMS 220	Issues and Ethics in Human Services	3
PSY 201	Lifespan Development	3

PSY 205	Abnormal Psychology	3
Locally Determined Courses		6

Substance Abuse Concentration (18 credits)
With a concentration in substance abuse, you may find a job in substance abuse centers (residential, detox, hospitals) as counselors or counselors-in-training.

HMS 113	Problems of Substance Abuse in Society	3
HMS 208	Treatment Models of Substance Abuse	3
HMS 209	Counseling Issues in Substance Abuse	3
HMS 210	Issues of Substance Abuse in Family Systems	3
Locally Determined Courses		6

Technical Certificate
To earn this degree, you must have 31 credits in the following areas:

General Education Core	7
Professional/Technical Core	3
Concentration Courses	21

General Education (7 Credits)

COM 101	Fundamentals of Public Speaking	3
or		
COM 102	Introduction to Interpersonal Communication	3
IVY 1XX	Life Skills Elective	1
PSY 101	Introduction to Psychology	3

Professional/Technical (3 credits)

HMS 101	Introduction to Human Services	3

Mental Health Concentration (21 credits)

HMS 205	Behavior Modification/Choice Theory	3
PSY 205	Abnormal Psychology	3
Locally Determined Courses		15

Direct Support Professional Concentration (21 credits)

HMS 102	Helping Relationship Techniques	3
HMS 103	Interviewing and Assessment	3
HMS 116	Introduction to Disabilities	3
HMS 123	Health and Wellness	3
HMS 126	Community Integration	3
HMS 127	Positive Personal Support	3
HMS 128	Disability Support Teams	3

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Interior Design

Program Description

The Interior Design Program provides career education in the creation of safe, functional, productive and aesthetically pleasing interior and exterior environments for work, home, health and recreation. Students investigate many topics ranging from the interaction between human beings and their environments, to design conception and problem-solving, to materials specifying, project management and more. Student activities culminate in the development of an exit portfolio and resumé demonstrating the skills and knowledge for a professional position in one of many concentration areas.

Sample Careers

Interior designer, landscape designer, retail designer

Degrees Available

Associate of Applied Science

Concentrations Offered

Decorative Arts and Design, Garden Design, Interior Design

Availability of concentrations and degrees varies by campus. Contact your local campus for more information. See page 8 for contact information.

Associate of Applied Science

To earn this degree, you must have 67 credits in the following areas:

General Education Core	19
Professional/Technical Core	24
Concentration Courses	12
Locally Determined Courses	12

General Education (19 Credits)

ARH 101	Survey of Art and Culture I	3
ARH 102	Survey of Art and Culture II	3
** COM 101	Fundamentals of Public Speaking	3
or		
** COM 102	Introduction to Interpersonal Communication	3
ENG 111	English Composition	3
IVY 1XX	Life Skills Elective	1
** MAT 1XX	Mathematics Elective	3

Professional/Technical (24 credits)

INT 101	Design Theory	3
INT 102	Drafting and Construction	3
INT 103	Introduction to Interior Design	3
INT 105	Design Presentations	3
INT 201	Interior Materials	3
INT 203	Professional Practices	3
^ INT 209	Portfolio Preparation/Internship	3
INT 216	CAD for Environmental Designers	3

Choose One of the Following Concentrations

Decorative Arts and Design Concentration (24 credits)
Do you know the difference between faux finish and Venetian plaster? If you're interested in decorative arts, this concentration will prepare you with classes ranging from three-dimensional design to visual merchandising.

ART 100	Life and Object Drawing I	3
ART 103	Three-Dimensional Design	3
INT 109	History of Interiors I	3
INT 217	Visual Merchandising	3
Locally Determined Courses		12

Garden Design Concentration (24 credits)
Are your thumbs green? As a garden designer, you'll be able to put them to use. This concentration offers studies on designing and maintaining harmonious natural ecosystems for human enjoyment and use.

GDN 110	Fundamentals of Gardening	3
GDN 114	Garden Design I	3
GDN 115	History of Garden Design	3
GDN 116	Theme Gardening	3
Locally Determined Courses		12

Interior Design Concentration (24 credits)
As an interior designer, you're responsible for the decoration, design and functionality of your client's space. This concentration prepares you for careers in the creation of safe, functional and aesthetically pleasing interior and exterior environments for work, home, health and recreation.

INT 103	Introduction to Interior Design	3
INT 104	Textiles for Interiors	3
INT 108	Interior Design II	3
INT 109	History of Interiors I	3
INT 200	Lighting and Building Systems	3
Locally Determined Courses		9

IVY TECH
COMMUNITY
COLLEGE

Kinesiology

Program Description

With an Associate of Science degree in Kinesiology, you will acquire an understanding of motion, particularly of the human body. The purpose of this degree program is to prepare you to work in entry-level positions in fitness leadership, sports management, wellness promotion, and corporate wellness.

Articulated transfer opportunities are available with Indiana University Bloomington with specializations in Sports Marketing/Management, Fitness and Exercise Science. Students can transfer from the Ivy Tech Community College Bloomington campus to the Department of Kinesiology in the School of Health, Physical Education and Recreation at the Indiana University Bloomington campus.

Degrees Available
Associate of Science

Concentrations Offered
None

Availability of concentrations and degrees varies by campus. Contact your local campus for more information. See page 8 for contact information.

Associate of Science
To earn this degree, you must have 65 credits in the following areas:

General Education Core	44
Professional/Technical Core	21

General Education (44 Credits)

COM 101	Fundamentals of Public Speaking	3
COM 102	Introduction to Interpersonal Communication	3
ENG 111	English Composition	3
ENG 112	Exposition and Persuasion	3
ENG 205	Creative Writing	3
ENG 211	Technical Writing	3
IVY 1XX	Life Skills Elective	1
MAT 135	Finite Math	3
PHY 101	Physics I	4
PSY 101	Introduction to Psychology	3
SOC 111	Introduction to Sociology	3
XXX XXX	Life Physical Science electives	6
XXX XXX	Humanities/Social Science electives	6

Professional/Technical (21 credits)

BUS 101	Introduction to Business	3
BUS 102	Business Law	3
CIS 101	Introduction to Microcomputers	3
ECN 201	Principles of Macroeconomics	3
ECN 202	Principles of Microeconomics	3
HPR 211	Introduction to Sport Management	3
HPR 212	Introduction to Exercise Science	3

Liberal Arts

Program Description

The Associate of Arts and Associate of Science in Liberal Arts are transfer programs that provide you with an opportunity to complete the first two years of study leading to a bachelor's degree in liberal arts areas.

Articulation agreements have been established with all the public, four-year universities in Indiana so that if you complete your associate degree, you may fulfill the requirements for a related bachelor's degree in an additional two years of full-time study at the university.

Sample Careers
Transfer degree

Degrees Available
Associate of Arts, Associate of Science

Concentrations Offered
English and Communication, Foreign Language, Humanities Life and Physical Sciences, Mathematics Social and Behavioral Sciences

Availability of concentrations and degrees varies by campus. Contact your local campus for more information. See page 8 for contact information.

Library Technical Assistant

Program Description

The Library Technical Assistant program will give you an understanding of the history of libraries and the functions and roles of the different types of libraries. You will have an understanding of and be functionally proficient in: basic library technical services including ordering, processing, and copy-cataloging of the variety of types and forms of materials found in libraries; library public support services including circulation, interlibrary loan, and basic reference, and computer operations as they relate to library functions.

As a library technical assistant, you might work under the supervision of librarians in circulation, technical processing, reference and audio-visual services. You also might assist librarians in the preparation and organization of materials and help patrons use the library.

Sample Careers
Staff positions in public, academic, school and special libraries

Degrees Available
Associate of Science

Concentrations Offered
Children's Services, Library Technology

Availability of concentrations and degrees varies by campus. Contact your local campus for more information. See page 8 for contact information.

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Associate of Science

To earn this degree, you must have 61 credits in the following areas:

General Education Core	25
Professional/Technical Core	24
Concentration Courses	12

General Education (25 Credits)

COM 102	Introduction to Interpersonal Communication	3
ENG 111	English Composition	3
IVY 1XX	Life Skills Elective	1
MAT 118	Concepts in Mathematics	3
PSY 101	Introduction to Psychology	3
SOC 111	Principles of Sociology	3
XXX XXX	Humanities Elective	6
XXX XXX	Life/Physical Science Elective	3

Professional/Technical (18 credits)

CIS 101	Introduction to Microcomputers	3
LIB 101	Introduction to Libraries and Library Services	3
LIB 102	Introduction to Reference Sources and Services	3
LIB 103	Introduction to Libraries Public Services	3
LIB 104	Introduction to Technical Services	3
LIB 201	Cataloging and Classification	3
LIB 202	Electronic Resources and Online Searching	3
LIB 206	Library Assistant Practicum	3

Choose One of the Following Concentrations

Children's Services Concentration (12 credits)
This concentration will prepare you to work under the supervision of a children's librarian or in the children's section of a library.

Four Concentrations from List:

ECE 120	Child Growth and Development	3
ECE 130	Developmentally Appropriate Guidance in Cultural Context	3
ECE 223	School Age Programming	3
ECE 233	Emerging Literacy	3
LIB 203	Library Services for Children	3

LIB 204	Library Media Center Operations and Services	3
LIB 205	Library/Media Materials and Equipment	3
LIB XXX	Special Topics	3

Library Technician Concentration (12 credits)
The ever changing world of technology affects libraries just as much as it does other businesses and facilities. This concentration equips you with knowledge to support a library through such areas as websites and information systems.

Four Concentrations from List:

CIS 102	Information Systems Funamentals	3
CIS 157	Web Site Development	3
OAD 110	Presentation Graphics	3
OAD 114	Desktop Publishing	3
OAD 207	Integrated Applications	3
OAD 214	Multimedia Design	3
OAD 218	Spreadsheets	3
LIB XXX	Special Topics	3

IVY TECH
COMMUNITY
COLLEGE

Machine Tool Technology

Program Description

Virtually all manufactured products depend on America's precision machining industry at some point during their production. The Machine Tool Technology program was developed from employer input—employers who know the demand for solid training in this specialized field of metal cutting operations for the creation of machined parts, specialized tooling molds, dies and prototypes.

Sample Careers

Machinists, First line supervisors/managers of production and operating workers, tool and die makers

Degrees Available

Associate of Applied Science

Concentrations Offered

None

Associate of Applied Science

To earn this degree, you must have 65 credits in the following areas:

General Education Core	20
Professional/Technical Core	45

General Education (20 Credits)

COM 101	Fundamentals of Public Speaking	3
ENG 111	English Composition	3
IVY 1XX	Life Skills Elective	1
MAT 111	Intermediate Algebra	3
MAT 121	Geometry/Trigonometry	3
PHY 101	Physics I	4
XXX XXX	Humanities/Social Science Elective	3

Professional/Technical (45 credits)

DSN 103	CAD Fundamentals	3
DSN 227	Geometric Dimensions and Tolerancing	3
MIT 102	Introduction to Print Reading	3
MTT 102	Turning Processes I	3
MTT 103	Milling Processes I	3
MTT 204	Abrasive Processes I	3
MTT 208	CNC Programming I	3
MTT 209	CNC Programming II	3
MTT 220	CAD/CAM I	3
MTT 240	Machine Operations I	3
MTT 241	Machine Operations II	3
MTT 242	CNC Machining	3
TEC 101	Processes and Materials	3
TEC 102	Technical Graphics	3
TEC 104	Computer Fundamentals for Technology	3

IVY TECH
COMMUNITY
COLLEGE

Manufacturing & Industrial Technology

Program Description

The Manufacturing and Industrial Technology program is designed to prepare you for the modern industrial manufacturing environment. In today's modern factories, CNC machines and automated equipment fabricate industrial and consumer products. To operate in the modern manufacturing facility requires highly trained individuals.

Sample Careers

Industrial technologist, CNC technologist, machinist, quality manager

Degrees Available

Associate of Science, Associate of Applied Science
Technical Certificate

Certificates Offered

Fluid Power, Heating and Air Conditioning
Industrial Electrician, Machine Tool, Structural Welding

Concentrations Offered

Computer-Aided Design & Manufacturing (CAD/CAM), Computerized Integrated Manufacturing (CIM), Computer Numerical Control (CNC), Facilities Maintenance, HVAC, Industrial Electrician, Industrial Maintenance, Machine Tool, Maintenance Technician Mechanical, Mechanical Maintenance, Operations, Plastics, Power Plant Technology, Process Control and Automation, Quality Assurance, Tool and Die, Welding

Associate of Science

Articulated transfer through an Associate of Science in Manufacturing and Industrial Technology is available with Purdue University at Richmond. To view this Associate of Science transfer degree program and to see if it is available at your local Ivy Tech campus, students should go to *http://www.ivytech.edu*.

Students are encouraged to review this option with their advisors, to consult the current catalog of the institution to which they wish to transfer, and to contact the institution to which they wish to transfer. Additional opportunities for course and program transfer may also be available at your local campus. Students should contact the transfer office of their local Ivy Tech for further information.

Associate of Applied Science

To earn this degree, you must have 62 credits in the following areas:

General Education Core	20
Professional/Technical Core	18
Concentration Courses	12
Locally Determined Courses	12

General Education (20 Credits)

COM 101	Fundamentals of Public Speaking	3
ENG 111	English Composition	3
IVY 1XX	Life Skills Elective	1
MAT 111	Intermediate Algebra	3
or		
MAT 117	The Art of Geometry	3
or		
MAT 118	Concepts in Mathematics	3
MAT 121	Geometry/Trigonometry	3
PHY 100	Technical Physics	4
or		
PHY 101	Physics I	4
* XXX XXX	Humanities/Social Sciences Elective	3

Professional/Technical (18 credits)

MIT 102	Introduction to Print Reading	3
MIT 106	Introduction to the Workplace and Safety	3
MIT 113	Basic Electricity	3
^ MIT 260	Problem Solving and Teamwork	3
TEC 101	Processes and Materials	3
or		
MIT 114	Introductory Welding	3
TEC 104	Computer Fundamentals for Technology	3

Choose One of the Following Concentrations

CAD/CAM Concentration (24 credits)

This concentration will prepare you to be a vital link between the product design engineer and the production worker. Industrial CAD/CAM specialists translate the engineer's concept into detailed drawings of objects to be manufactured.

DSN 103	CAD Fundamentals	3
MTT 208	CNC Programming I	3
MTT 220	CAD/CAM I	3
MTT 221	CAD/CAM II	3
Locally Determined Courses		12

CIM Concentration (24 credits)

This concentration will train you to apply knowledge, problem solving techniques, and hands-on skills in the design and application of computer-based manufacturing systems, automated manufacturing processes, process controls, manufacturing operations and management, systems integration, and continuous improvement.

CIM 102	Introduction to Robotics	3
CIM 202	Work Cell Design and Integration	3
CIM 205	Automated Manufacturing Systems	3
MIT 205	Programmable Controllers I	3
Locally Determined Courses		12

CNC Concentration (24 credits)

The computer numerical control (CNC) program includes studies in robotics, automated manufacturing and programmable controllers.

MTT 208	CNC Programming I	3
MTT 209	CNC Programming II	3
MTT 210	Interactive CNC	3
MTT 211	Advanced Programming Techniques	3
Locally Determined Courses		12

Facilities Maintenance Concentration (24 credits)

The facilities maintenance concentration prepares students for careers in building maintenance.

HEA 101	Heating Fundamentals	3
HEA 103	Refrigeration I	3
IDS 120	Basic Carpentry and Building Maintenance	3
IDS 122	General Maintenance	3
	Locally Determined Courses	12

HVAC Concentration (24 credits)
This concentration will prepare you to install and repair heating, air conditioning, refrigeration and ventilation systems.

HEA 101	Heating Fundamentals	3
HEA 103	Refrigeration I	3
HEA 104	Heating Service	3
HEA 106	Refrigeration II	3
	Locally Determined Courses	12

Industrial Electrician Concentration (24 credits)
The industrial electrician concentration includes studies in electrical wiring and circuitry, motor and motor controls and programmable controls.

IMT 122	Electrical Wiring Fundamentals	3
IMT 207	Electrical Circuits	3
MIT 103	Motors and Motor Controls	3
MIT 205	Programmable Controllers I	3
	Locally Determined Courses	12

Industrial Maintenance Concentration (24 credits)
This concentration will provide you with a broad range of skills applicable to a variety of jobs in the industrial environment. You will be prepared to install, repair, maintain and troubleshoot industrial machinery and equipment such as pumps, motors, pneumatic and hydraulic systems, and production machinery.

IMT 203	Machine Maintenance/Installation	3
MIT 103	Motors and Motor Controls	3
MIT 104	Fluid Power Basics	3
MIT 205	Programmable Controllers I	3
	Locally Determined Courses	12

Machine Tool Concentration (24 credits)
Today's industries rely on trained and skilled machinists, machine operators and manufacturers to produce precision components for everything from household appliances to aircraft parts. With training that includes computer numerical controlled (CNC) operation and programming, as well as robotics and computer-aided design (CAD) systems, you'll be prepared for a machine tool-related career.

MIT 114	Introductory Welding	3
MTT 101	Introduction to Machining	3
MTT 110	Turning and Milling Processes	3
MTT 204	Abrasive Processes I	3
	Locally Determined Courses	12

Maintenance Technician Mechanical Concentration (24 credits)
General maintenance mechanics often do a variety of tasks in a single day. Industrial maintenance mechanics spend much of their time doing preventive maintenance such as keeping machines cleaned, oiled and greased. It is the job of the mechanic to prevent costly breakdowns, keep up-to-date records and try to anticipate trouble and service the equipment before production is interrupted.

IMT 106	Millwright I	3
IMT 201	Fluid Power Systems	3
MIT 104	Fluid Power Basics	3
WLD 100	Welding Processes	3
	Locally Determined Courses	12

Mechanical Maintenance Concentration (24 credits)
The Mechanical Maintenance concentration includes instruction in advanced industrial mechanics, fluid power, and machine installation.

IMT 203	Machine Maintenance/Installation	3
IMT 211	Advanced Industrial Mechanics I	3
MIT 104	Fluid Power Basics	3
MTT 101	Introduction to Machining	3
	Locally Determined Courses	12

Operations Concentration (24 credits)
The operations concentration includes studies in iron and steel-making and quality and statistical control.

MIT 115	Iron and Steelmaking I	3
MIT 116	Iron and Steelmaking II	3
QSC 101	Quality Control Concepts and Techniques I	3
QSC 102	Statistical Process Control	3
	Locally Determined Courses	12

Plastics Concentration (24 credits)
The plastics concentration provides studies in injection molding, polymer science and related plastics manufacturing processes.

PMT 101	Introduction to Plastics	3
PMT 106	Introduction to Polymer Science	3
PMT 107	Injection Molding	3
PMT 209	Manufacturing of Plastic Products	3
	Locally Determined Courses	12

Power Plant Technology Concentration (24 credits)
This concentration places an emphasis on the operation of modern power plants and will provide you with the necessary skills for a career in this field. You will learn technical and safety aspects of plant and facility operations.

PPT 101	Power Plant Fundamentals	3
PPT 121	Power Plant Steam Systems	3
PPT 201	Power Plant Instrumentation and Control	3
PPT 221	Advanced Power Plant Systems	3
	Locally Determined Courses	12

Process Control and Automation Concentration (24 credits)
Process control is a statistics and engineering discipline that deals with architecture mechanisms for controlling the output of a specific process. Heating up the temperature in a room and controlling air conditioning are process controls. This concentration will make you aware of process control systems in practice and they will become familiar with sure applications as discrete, batch and continuous.

MIT 205	Programmable Controllers I	3
MIT 207	Process Control and Automation I	3
MIT 208	Process Control and Automation II	3
MIT 209	Process Control and Automation III	3
	Locally Determined Courses	12

Quality Assurance Concentration (24 credits)
The quality assurance concentration prepares students for positions ensuring quality control of manufacturing and industrial assembly line equipment and processes.

QSC 101	Quality Control Concepts and Techniques I	3
QSC 201	Advanced Statistical Process Control	3
QSC 202	Quality Control Concepts and Techniques II	3
QSC 203	Metrology	3
	Locally Determined Courses	12

Manufacturing and Industrial Technology continued

Tool and Die Concentration (24 credits)
This concentration offers studies in metallurgy, tooling design and related courses and prepares you for technical level positions in the manufacturing industry.

MIT 120	Metallurgy Fundamentals	3
MTT 206	Tooling Design I	3
MTT 207	Tooling Design II	3
MTT 225	Mold Making	3
	Locally Determined Courses	12

Welding Concentration (24 credits)
This concentration is designed for you if you are interested in learning welding or upgrading your skills in the various processes. Novices and advanced-level students can benefit from the individualized competency-based program offered. This concentration offers a variety of skill levels in oxyacetylene, arc, MIG, TIG, and welding/cutting processes, using both manual and semi-automatic applications.

WLD 108	Shielded Metal Arc Welding I	3
WLD 207	Gas Metal Arc (MIG) Welding	3
WLD 208	Gas Tungsten Arc (TIG) Welding	3
WLD 210	Welding Fabrication I	3
	Locally Determined Courses	12

Technical Certificate
To earn this degree, you must have 31 credits in the following areas:

General Education Core	7
Professional/Technical Core	3
Concentration Courses	6
Locally Determined Courses	15

General Education (7 Credits)

COM 101	Fundamentals of Public Speaking or	3
ENG 111	English Composition	3
IVY 1XX	Life Skills Elective	1
MAT 111	Intermediate Algebra	3

Professional/Technical (3 credits)

MIT 102	Introduction to Print Reading	3

Choose One of the Following Concentrations

CAD/CAM Concentration (21 credits)

MTT 220	CAD/CAM I	3
MTT 221	CAD/CAM II	3
	Locally Determined Courses	15

CNC Concentration (21 credits)

MTT 208	CNC Programming I	3
MTT 209	CNC Programming II	3
	Locally Determined Courses	15

Facilities Maintenance Concentration (21 credits)

HEA 101	Heating Fundamentals	3
HEA 103	Refrigeration I	3
	Locally Determined Courses	15

HVAC Concentration (21 credits)

HEA 101	Heating Fundamentals	3
HEA 103	Refrigeration I	3
	Locally Determined Courses	15

Industrial Electrician Concentration (21 credits)

IDS 103	Motors and Motor Controls	3
IMT 122	Electrical Wiring Fundamentals	3
	Locally Determined Courses	15

Industrial Maintenance Concentration (21 credits)

MIT 104	Fluid Power Basics	3
MIT 113	Basic Electricity	3
	Locally Determined Courses	15

Machine Tool Concentration (21 credits)

MTT 101	Introduction to Machining	3
MTT 110	Turning and Milling Processes	3
	Locally Determined Courses	15

Machine Maintenance Concentration (21 credits)

IDS 104	Fluid Power Basics	3
IMT 203	Machine Maintenance/Installation	3
	Locally Determined Courses	15

Plastics Concentration (21 credits)

PMT 101	Introduction to Plastics	3
PMT 106	Plastic Materials and Testing	3
	Locally Determined Courses	15

Tool and Die Concentration (21 credits)

MIT 120	Metallurgy Fundamentals	3
MTT 206	Tooling Design I	3
	Locally Determined Courses	15

Welding Concentration (21 credits)

WLD 108	Shielded Metal Arc Welding I	3
WLD 207	Gas Metal Arc (MIG) Welding	3
	Locally Determined Courses	15

Certificates

Fluid Power (27 Credits)

IMT 201	Fluid Power Systems (Hydraulics/Pneumatics)	3
IMT 203	Machine Maintenance/Installation	3
IMT 207	Electrical Circuits	3
MIT 102	Introduction to Print Reading	3
MIT 103	Motors and Motor Controls	3
MIT 104	Fluid Power Basics	3
MIT 106	Introduction to the Workplace and Safety	3
MIT 113	Basic Electricity	3
MIT 114	Introductory Welding	3

Heating and Air Conditioning (21 credits)

HEA 101	Heating Fundamentals	3
HEA 103	Refrigeration I	3
HEA 104	Heating Service	3
HEA 106	Refrigeration II	3
HEA 202	Electrical Circuits and Controls	3
MIT 106	Introduction to the Workplace and Safety	3
MIT 113	Basic Electricity	3

Industrial Electrician (24 credits)

ELT 225	Introduction to National Electrical Code	3

IMT 122 Electrical Wiring Fundamentals/NEC Code	3
IMT 207 Electrical Circuits	3
MIT 103 Motors and Motor Controls	3
MIT 113 Basic Electricity	3
MIT 205 Programmable Controllers I	3
MIT 206 Programmable Controllers II	3
TEC 104 Computer Fundamentals for Technology	3

Machine Tool (18 credits)

MIT 102	Introduction to Print Reading	3
MIT 106	Introduction to the Workplace and Safety	3
MIT 101	Introduction to Machining	3
MTT 105	Abrasive Processes I	3
MTT 110	Turning and Milling Processes	3
MTT 208	CNC Programming I	3

Structural Welding (24 credits)

MIT 102	Introduction to Print Reading	3
WLD 103	Arc Welding I	3
WLD 108	Shielded Metal Arc Welding I	3
WLD 109	Oxy-fuel Gas Welding and Cutting	3
WLD 202	Special Welding Processes	3
WLD 206	Shielded Metal Arc Welding II	3
WLD 207	Gas Metal Arc (MIG) Welding	3
WLD 209	Welding Certification	3
WLD 210	Welding Fabrication I	3

IVY TECH
COMMUNITY
COLLEGE

Medical Assisting

Program Description

A graduate of the Medical Assistant Program is a professional, multi-skilled healthcare provider dedicated to assisting in patient care management in an ambulatory care setting. You would perform administrative and clinical duties and may manage emergency situations, facilities and/or personnel. Competence in the field requires professionalism and effective communication skills as well as technical skills. A required externship provides valuable on-the-job experience.

Sample Careers

Certified Medical Assistant (CMA), medical assistant, insurance specialist, medical transcriptionist

Degrees Available

Associate of Applied Science, Technical Certificate

Concentrations Offered

Administrative, Clinical, EKG, Generalist, Insurance, Medical Assistant, Pharmacy Technician, Phlebotomy, Therapeutic Massage, Transcription

Availability of concentrations and degrees varies by campus. Contact your local campus for more information. See page 8 for contact information.

The Ivy Tech Community College Medical Assisting Program is accredited by the Commission on Accreditation of Allied Health Education Programs (CAAHEP), on recommendation of the Curriculum Review Board of the American Association of Medical Assistants Endowment (CRB-AAMAE).

Commission on Accreditation of
Allied Health Education Programs
35 East Wacker Drive, Suite 1970
Chicago, IL 60602-2208
(312) 553-9355

Only graduates of the AAS and GENERALIST-TC are eligible to take the national exam to become a Certified Medical Assistant (CMA). The American Association of Medical Assistants Certifying Board (AAMA CB) awards the CMA credential after successful completion of the exam. The Commission on Accreditation of Allied Health Education Programs (CAAHEP), in collaboration with the Curriculum Review Board (CRB) of the AAMA Endowment (a committee on accreditation of CAAHEP), accredits medical assisting programs.

Associate of Applied Science

To earn this degree, you must have 61 credits in the following areas:

General Education Core	19
Professional/Technical Core	36
Locally Determined Courses	6

General Education (19 Credits)

ANP 101	Anatomy and Physiology I	3
ANP 102	Anatomy and Physiology II	3
COM 101	Fundamentals of Public Speaking	3
or		
COM 102	Introduction Interpersonal Communication	3
ENG 111	English Composition	3
IVY 1XX	Life Skills Elective	1
* MAT 1XX	Math Elective	3
* XXX XXX	Humanities/Social Sciences Elective	3

Professional/Technical (42 credits)

HHS 101	Medical Terminology	3

Medical Assisting continued

MEA 107	Administrative I	3
MEA 108	Administrative II	3
MEA 137	Medical Insurance and Basic Coding with Computer Applications	3
MEA 207	Integrated Medical Office Systems	3
MEA 218	Pharmacology	3
MEA 219	Medical Assisting Laboratory Techniques	3
MEA 238	Clinical I	3
MEA 239	Clinical II	3
^ MEA 242	Disease Conditions	3
MEA 258	Medical Assisting Clinical Externship	3
MEA 259	Medical Assisting Administrative Externship	3
	Locally Determined Courses	6

Technical Certificate
To earn this degree, you must have 31-46 credits in the following areas:

General Education Core	7
Professional/Technical Core	3
Concentration Courses	6-39
Locally Determined Courses	0-15

General Education (7 Credits)

	IVY 1XX	Life Skills Elective	
*	XXX XXX	English/Communications Elective	3
*	XXX XXX	Social Science/Science/Mathematics/ Humanities Elective	3

Professional/Technical (3 credits)

HHS 101	Medical Terminology	3

Choose One of the Following Concentrations

Administrative Concentration (21 credits)
This concentration includes classes that cover a range of administrative-centered duties within the medical assisting field.

MEA 107	Administrative I	3
MEA 108	Administrative II	3
	Locally Determined Courses	15

Clinical Concentration (21 credits)
This concentration includes classes that cover a range of clinic-centered responsibilities within the medical assisting field.

MEA 238	Clinical I	3
MEA 239	Clinical II	3
	Locally Determined Courses	15

Generalist Concentration (36 credits)
The Generalist Concentration is the one concentration that will allow you to sit for certification.

**	ANP 101	Anatomy and Physiology I	3
**	ANP 102	Anatomy and Physiology II	3
	MEA 107	Administrative I	3
	MEA 108	Administrative II	3
	MEA 137	Medical Insurance and Basic Coding with Computer Applications	3
	MEA 207	Integrated Medical Office Systems	3
	MEA 218	Pharmacology	3
	MEA 219	Medical Assisting Laboratory Techniques	3
	MEA 238	Clinical I	3
	MEA 239	Clinical II	3
	MEA 258	Medical Assisting Clinical Externship	3
	MEA 259	Medical Assisting Administrative Externship	3

EKG Concentration (21 credits)
This concentration will prepare you to administer diagnostic EKG testing and start you on your way to a career as an EKG Technician.

MEA 205	Introduction to Electrocardiography	3
MEA 206	Advanced Electrocardiography Techniques	3
	Locally Determined Courses	15

Insurance Concentration (21 credits)
Correctly coding and billing insurance claims is a vital piece of the medical profession and is a job which demands specialized training. This concentration starts with basic insurance claims and coding, and progresses to advanced duties which include hospital billing, coding and claims.

MEA 137	Medical Insurance and Basic Coding with Computer Applications	3
MEA 213	Advanced Insurance Coding	3
MEA 220	Advanced Insurance Claims Processing	3
	Locally Determined Courses	12

Pharmacy Technician Concentration (21 credits)
This concentration will equip you to assist pharmacies, medical centers and other medical facilities.

ANP 101	Anatomy and Physiology I	3
ANP 102	Anatomy and Physiology II	. 3
CIS 101	Introduction to Microcomputers	3
MEA 151	Pharmacy Technician I	3
MEA 152	Pharmacy Technician II	3
MEA 218	Pharmacology	3
MEA 254	Pharmacy Externship or	3
MEA 255	Pharmacy Technical Experiential Seminar	3

Phlebotomy Concentration (21 credits)
This concentration prepares you to be a specialist in obtaining blood samples at hospitals, laboratories and other medical facilities.

MEA 212	Phlebotomy	3
MEA 257	Phlebotomy Externship	3
	Locally Determined Courses	15

Therapeutic Massage Concentration (21 credits)
This concentration provides you with information in anatomy and physiology of skeletal, cardiovascular, lymphatic, respiratory, and muscular systems. It includes information on different styles, techniques and viewpoints of massage. The course demonstrates the physiological effects of circulatory massage strokes.

HHS 105	Medical Law and Ethics	3
ANP 101	Anatomy and Physiology I	3
ANP 102	Anatomy and Physiology II	3
TMA 101	Holistic Approach to Massage Therapy	3
TMA 120	Massage Technician Training I	3
TMA 125	Acupressure Theory and Methods	3
TMA 140	Massage Technician Training II	3

Transcription Concentration (21 credits)
This concentration prepares you to work in the field of medical transcription with focus on word processing software and medical dictation. You will learn proofreading techniques and improve speed and accuracy in production of medical documents.

MEA 135	Medical Word Processing and Transcription	3
MEA 235	Advanced Transcription	3
	Locally Determined Courses	15

Medical Laboratory Technology

Program Description

As research continues to change the face of modern medicine, more sophisticated tests allow for more accurate and rapid diagnosis. Medical Laboratory Technology (MLT) has become a technologically complex field requiring specific knowledge and skills. The MLT program at Ivy Tech will train you to proficiently perform the duties required in a clinical laboratory. This two-year Associate in Applied Science Degree Program will prepare you theoretically and technically for the procedures you will be performing.

Sample Careers
Medical Laboratory Technician, Clinical Laboratory Technician

Degrees Available
Associate of Applied Science

Concentrations Offered
None

Associate of Applied Science

To earn this degree, you must have 68-70 credits in the following areas:

General Education Core	19-20
Professional/Technical Core	50-51

General Education (18 Credits)

	ANP 101 Anatomy and Physiology I	3
**	ANP 102 Anatomy and Physiology II	3
	or	
**	BIO 201 General Microbiology	4
**	COM 101 Fundamentals of Public Speaking	3
	or	
**	COM 102 Introduction to Interpersonal Communication	3
	ENG 111 English Composition	3
	IVY 1XXX Life Skills Elective	1
	MAT 111 Intermediate Algebra	3
**	PSY 101 Introduction to Psychology	3
	or	
**	SOC 111 Introduction to Sociology	3

Professional/Technical (50-51 credits)

**	CHM 101 Introductory Chemistry I	3
	or	
**	CHM 111 Chemistry I	4
	HHS 105 Medical Law and Ethics	3
	MLT 101 Fundamentals of Laboratory Techniques	3
	MLT 102 Routine Analysis Techniques	3
	MLT 201 Immunology Techniques	3
	MLT 202 Immunohematology Techniques	3
	MLT 205 Hematology Techniques I	3
	MLT 206 Hematology Techniques II	3
	MLT 207 Chemistry Techniques I	3
	MLT 209 Routine Analysis Applications	1
	MLT 210 Hematology Applications	3
	MLT 212 Immunology Applications	1
	MLT 213 Immunohematology Applications	3

	MLT 215 Parasitology and Mycology	1
^	MLT 218 Clinical Pathology	3
	MLT 221 Microbiology Applications	3
	MLT 222 Microbiology Techniques	3
	MLT 224 Chemistry Applications	3
	MLT 227 Chemistry Techniques II	2

IVY TECH
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Mortuary Science

Program Description

The aim of the Mortuary Science program is to stress the importance of funeral service education personnel as members of the communities in which they serve. Engaged as human services professionals, personnel are active participants in the relationship between bereaved families and the funeral service profession. Knowledgeable of and compliant with all ethical and regulatory guidelines, funeral service professionals are responsible for the public health, safety and welfare in caring for human remains.

You will graduate with a concern for the responsibility of funeral service to the community at large. You will develop proficiency in relevant skill sets allowing you to be gainfully employed in, and contribute to the funeral service profession. Ethical conduct concerning all aspects of the business is taught..

The annual passage rate of first-time takers on the National Board Examination (NBE) for the most recent three-year period for this institution and all ABFSE accredited funeral service education programs is posted on the ABFSE website (www.abfse.org).

The Mortuary Science Program at Ivy Tech Community College of Indiana-De La Garza campus is accredited by the American Board of Funeral Service Education, 3432 Ashland Avenue, Suite U, St. Joseph, MO 64506, (816) 233-3747.

The Mortuary Science Program at Ivy Tech Community College of Indiana-Central Indiana is currently a Candidate for Accreditation program with the American Board of Funeral Service Education, 3432 Ashland Avenue, Suite U, St. Joseph, MO 64506, (816) 233-3747.

Caution: Students applying for admission to the Ivy Tech Community College of Indiana-Central Indiana Mortuary Science program should contact their respective state board of funeral service regarding that state board's approval of this particular program of instruction.

Sample Careers
Embalmer, funeral director

Degrees Available
Associate of Applied Science

Concentrations Offered
None

Availability of concentrations and degrees varies by campus. Contact your local campus for more information. See page 8 for contact information.

Associate of Applied Science

To earn this degree, you must have 64 credits in the following areas:

General Education Core	19
Professional/Technical Core	45

General Education (19 Credits)

ANP 101	Anatomy and Physiology I	3
ANP 102	Anatomy and Physiology II	3
BIO 211	General Microbiology I	3
COM 102	Introduction to Interpersonal Communication	3
ENG 111	English Composition	3
IVY 1XXX	Life Skills Elective	1
MAT 111	Intermediate Algebra	3
or		
MAT 118	Concepts in Mathematics	3

Professional/Technical (45 credits)

	ACC 101	Financial Accounting	3
	BUS 101	Introduction to Business	3
	CIS 101	Introduction to Microcomputers	3
	MOR 100	Orientation to Funeral Service	3
	MOR 101	Grief Psychology for Funeral Service	3
	MOR 102	Mortuary Law	3
	MOR 103	Embalming Chemistry	3
	MOR 104	Funeral Service Equipment	3
^	MOR 202	Funeral Management	3
	MOR 206	Embalming Theory	3
	MOR 207	Embalming Practicum	3
	MOR 208	Pathology for Funeral Service	3
	MOR 209	Restorative Art	3
	MOR 217	Embalming Practicum II	3
	SOC 111	Introduction to Sociology	3

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Nursing

Program Description

The Associate of Science in Nursing Program is designed to accommodate two groups of students: those who are entering a nursing program for the first time and those licensed practical nurses or certified paramedics seeking educational mobility to the associate-degree level. As a graduate of the ASN program, you will be eligible to take the NCLEX-RN examination to become registered nurses. You may seek immediate employment as nurses or choose to transfer their credits to a four-year institution offering a baccalaureate degree.

Sample Careers
Registered Nurse

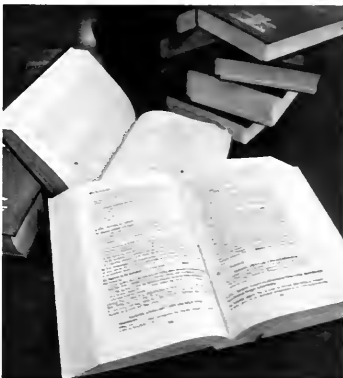## Degrees Available
Associate of Science

Concentrations Offered
None

Availability of concentrations and degrees varies by campus. Contact your local campus for more information. See page 8 for contact information.

Articulated transfer opportunities are available with Ball State University, the IU School of Nursing, Indiana State University, and the University of Southern Indiana. Students are encouraged to review these options with their advisors, to consult the current catalog of the institution to which they wish to transfer, and to contact the institution to which they wish to transfer. Additional opportunities for course and program transfer may also be available at your local campus. Students should contact the transfer office of their local Ivy Tech for further information.

Associate of Science
To earn this degree, you must have 52-68 credits in the following areas:

General Education Core	31-33
Professional/Technical Core	14-38

General Education (31-33 Credits)

!*	ANP 101 Anatomy and Physiology I	3
!*	ANP 102 Anatomy and Physiology II	3
!*	ENG 111 English Composition	3
	IVY 1XX Life Skills Elective	1
!*	PSY 101 Introduction to Psychology	3
	MAT 111 Intermediate Algebra or	3
	MAT 117 The Art of Geometry or	3
	MAT 118 Concepts in Mathematics	3
	PSY 201 Lifespan Development or	3
	PSY 205 Abnormal Psychology or	3
	SOC 111 Introduction to Sociology or	3
	SOC 164 Introduction to Multicultural Studies	3
	COM 101 Fundamentals of Public Speaking or	3
	COM 102 Introduction to Interpersonal Communication	3
	ENG 112 Exposition and Persuasion or	3
	ENG 211 Technical Writing	3

Choose two of the following:

	ANP 201 Advanced Human Physiology	4
<>	BIO 211 General Microbiology	3
><	CHM 101 Introductory Chemistry	3
	PHY 101 Physics I	4

Professional/Technical Traditional (38 credits)

	NSG 100 Fundamentals of Nursing	3
X	NSG 101 Fundamentals of Nursing Lab	1
	NSG 102 Medical-Surgical Nursing I	2
	NSG 103 Medical-Surgical Nursing I Lab	2
	NSG 105 Medical-Surgical Nursing I Clinical	2
	NSG 106 Pharmacology for Nursing	3
	NSG 110 Medical Surgical Nursing II	3
	NSG 111 Medical Surgical Nursing II Clinical	2
	NSG 112 Maternal-Child Nursing	3
	NSG 113 Maternal-Child Nursing Clinical	2
	NSG 114 Health Care Concepts in Nursing	1
^	NSG 200 Complex Medical-Surgical Nursing for the ASN	3
	NSG 201 Complex Medical-Surgical Nursing for the ASN Clinical	4
	NSG 202 Nursing Care of the Complex Family	2
	NSG 203 Nursing Care of the Complex Family Clinical	2
	NSG 204 Psychiatric Nursing	2
	NSG 205 Psychiatric Nursing Clinical	1

Professional/Technical LPN Transition to Nursing (New Curriculum) (14 credits)

^	NSG 200 Complex Medical-Surgical Nursing for the ASN	3
	NSG 201 Complex Medical Surgical Nursing for the ASN Clinical	4
	NSG 202 Nursing Care for the Complex Family	2
	NSG 203 Nursing Care of the Complex Family Clinical	2
	NSG 204 Psychiatric Nursing	2
	NSG 205 Psychiatric Nursing Clinical	1

Professional/Technical LPN Transition to Nursing (Old Curriculum) (22 credits)

	NSG 106 Pharmacology for Nursing	3
	NSG 120 Transition to ASN for the LPN	5

	NSG 200 Complex Medical Surgical Nursing for the ASN	3
	NSG 201 Complex Medical Surgical Nursing for the ASN Clinical	4
	NSG 202 Nursing Care of the Complex Family	2
	NSG 203 Nursing Care of the Complex Family Clinical	2
	NSG 204 Psychiatric Nursing	2
	NSG 205 Psychiatric Nursing Clinical	1

Professional/Technical Paramedic Transition to Nursing (30 credits)

	NSG 106 Pharmacology for Nursing	3
	NSG 108 Transition for the Paramedic to the ASN	5
	NSG 109 Transition for the Paramedic to the ASN Lab/Clinical	3
	NSG 112 Maternal-Child Nursing	3
	NSG 113 Maternal Child Nursing Clinical	2
^	NSG 200 Complex Medical-Surgical Nursing for the ASN	3
	NSG 201 Complex Medical Surgical Nursing for the ASN Clinical	4
	NSG 202 Nursing Care for the Complex Family	2
	NSG 203 Nursing Care of the Complex Family Clinical	2
	NSG 204 Psychiatric Nursing	2
	NSG 205 Psychiatric Nursing Clinical	1

Symbol Key

^ Capstone Course

!* Courses must be successfully completed before admittance to the program

<> BIO 201 will substitute for BIO 211

>< CHM 111 will substitute for CHM 101

IVY TECH
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Office Administration

Program Description

As the business office relies increasingly on technology, companies need a well-trained, take-charge person to ensure that daily tasks are handled quickly and efficiently. In Ivy Tech's Office Administration Program, you'll learn the technical and interpersonal skills that will make you a key player in day-to-day operations. Not only will you cover basics of word processing, spreadsheets and databases, but you'll also study more advanced areas such as desktop publishing, developing skills that will move you to the top of a company's must-hire list. Programs are tailored for beginning, intermediate and advanced skill levels.

Sample Careers

Administrative assistant, first line manager, legal secretary, software application specialist

Degrees Available

Associate of Applied Science, Technical Certificate

Certificates Offered

Microsoft Office Specialist

Concentrations Offered

Administrative, Legal, Medical, Software Applications

Availability of concentrations and degrees varies by campus. Contact your local campus for more information. See page 8 for contact information.

Associate of Applied Science

To earn this degree, you must have 61 credits in the following areas:

General Education Core 19
Professional/Technical Core 18
Concentration Courses 12
Locally Determined Courses 12

General Education (19 Credits)

	COM 101	Fundamentals of Public Speaking	3
*	ECN XXX	Economics Elective	3
	ENG 111	English Composition	3
	IVY 1XX	Life Skills Elective	1
**	MAT 1XX	Mathematics Elective	3
*	XXX XXX	Life/Physical Sciences Elective	3
*	XXX XXX	Humanities/Social Sciences Elective	3

Professional/Technical (18 credits)

	ACC 101	Financial Accounting	3
	BUS 101	Introduction to Business	3
	OAD 103	Introduction to Computers with Word Processing	3
	OAD 119	Document Processing	3
	OAD 216	Business Communications	3
^	OAD 221	Organizational Leadership	3

Administrative Concentration (24 credits)

This concentration prepares you for an automated office environment, covering skills such as word processing and microcomputer operating systems. As an administrative assistant, your tasks might include secretarial duties, scheduling work and planning meetings, taking minutes and composing correspondence.

OAD 114	Desktop Publishing	3
OAD 121	Office Procedures and Team Dynamics	3
OAD 218	Spreadsheets	3
OAD 220	Records and Database Management	3
Locally Determined Courses		12

Legal Concentration (24 credits)

Legal office administrators perform and coordinate a law office's administrative activities and disseminate information to staff and clients. This concentration prepares you to use computers, business software and different legal research tools. Legal office administrators prepare correspondence and legal documents.

LEG 101	Introduction to Paralegal Studies	3
LEG 102	Legal Research	3
LEG 103	Civil Procedure	3
OAD 218	Spreadsheets	3
Locally Determined Courses		12

Medical Concentration (24 credits)

Working in a medical office requires specific job skills, such as a knowledge of medical terminology and transcription skills. Medical office administrators are responsible for a variety of administrative and clerical duties necessary to run a medical office efficiently.

HHS 101	Medical Terminology	3
MEA 137	Medical Insurance & Basic Coding with Computer Applications	3
OAD 121	Office Procedures and Team Dynamics	3
OAD 220	Records and Database Management	3
Locally Determined Courses		12

Software Applications Concentration (24 credits)

This concentration prepares you for an office environment, covering skills such as word processing, microcomputer operating systems, multimedia design and desktop publishing. With a software applications concentration, your career choice could range from software applications specialist to desktop publisher.

OAD 114	Desktop Publishing	3
OAD 214	Multimedia Design	3
OAD 218	Spreadsheets	3
OAD 222	Database Applications	3
Locally Determined Courses		12

Associate of Applied Science via Distance Education

To earn this degree, you must have 61 credits in the following areas:

General Education Core 19
Professional/Technical Core 42

General Education (19 Credits)

COM 101	Fundamentals of Public Speaking	3
* ECN XXX	Economics Elective	3
ENG 111	English Composition	3
IVY 1XX	Life Skills Elective	1
** MAT 1XX	Mathematics Elective	3
* XXX XXX	Life/Physical Sciences Elective	3
* XXX XXX	Humanities/Social Sciences Elective	3

Professional/Technical (18 credits)

ACC 101	Financial Accounting	3
BUS 101	Introduction to Business	3
OAD 103	Introduction to Computers with Word Processing	3
OAD 110	Presentation Graphics	3
OAD 114	Desktop Publishing	3
OAO 116	Essentials of Business Correspondence	3
OAD 119	Document Processing	3
OAD 121	Offi ce Procedures and Team Dynamics	3
OAD 130	Quality and Customer Care	3
OAD 216	Business Communications	3
OAD 218	Spreadsheets	3
OAD 220	Records and Database Management	3
^ OAD 221	Organizational Leadership	3
OAD 222	Database Applications	3

Technical Certificate
To earn this degree, you must have 31 credits in the following areas:

General Education Core	7
Professional/Technical Core	3
Concentration Courses	9
Locally Determined Courses	12

General Education (7 Credits)

ENG 111	English Composition	3
IVY 1XX	Life Skills Elective	1
* XXX XXX	Humanities/Social Sciences Elective	3

Professional/Technical (3 credits)

OAD 119	Document Processing	3

Other Required Courses (21 credits)

OAD 103	Introduction to Computers with Word Processing	3
OAD 121	Office Procedures	3
OAD 218	Spreadsheets	3
Locally Determined Courses		12

Certificate

Microsoft Office Specialist (18 Credits)

OAD 103	Introduction to Computers with Word Processing	3
OAD 110	Presentation Graphics	3
OAD 204	Outlook 2003	3
OAD 218	Spreadsheets	3
OAD 222	Database Applications	3
OAD 226	Advanced Electronic Spreadsheets	3

IVY TECH
COMMUNITY
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Paralegal Studies

Program Description
If you like writing, research and problem-solving, you'll love a career as a paralegal. Our Paralegal program provides students with the wide variety of skills needed to handle duties such as performing legal research, drafting legal correspondense, interviewing clients and managing trial exhibits. Courses are taught by attorneys who are experienced in the subject matter and familiar with the important role paralegals play as members of the legal team.

Sample Careers
Legal assistant, paralegal

Degrees Available
Associate of Science, Associate of Applied Science

Concentrations Offered
None

Availability of concentrations and degrees varies by campus. Contact your local campus for more information. See page 8 for contact information.

Paralegal Studies continued

Associate of Science

Articulated transfer through an Associate of Science in Paralegal Studies is available with Ball State University and IUPU-Fort Wayne. To view these Associate of Science transfer degree programs and to see if they are available at your local Ivy Tech campus, students should go to *http://www.ivytech.edu/*.

Students are encouraged to review these options with their advisors, to consult the current catalog of the institution to which they wish to transfer, and to contact the institution to which they wish to transfer. Additional opportunities for course and program transfer may also be available at your local campus. Students should contact the transfer office of their local Ivy Tech for further information.

Associate of Applied Science

To earn this degree, you must have 64 credits in the following areas:

General Education Core	19
Professional/Technical Core	33
Locally Determined Courses	12

General Education (19 Credits)

COM 101	Fundamentals of Public Speaking	3
or		
COM 102	Introduction to Interpersonal Communication	3
ENG 111	English Composition	3
ENG 112	Exposition and Persuasion	3
or		
ENG 211	Technical Writing	3
IVY 1XX	Life Skills Elective	1
** MAT 1XX	Intermediate Algebra or Higher	3
* XXX XXX	Humanities/Social Sciences Elective	3
* XXX XXX	Life/Physical Sciences Elective	3

Professional/Technical (45 credits)

CIS 101	Introduction to Microcomputers	3
LEG 101	Introduction to Paralegal Studies	3
LEG 102	Legal Research	3
LEG 103	Civil Procedures	3
LEG 106	Tort Law	3
LEG 107	Contracts and Commercial Law	3
LEG 108	Property Law	3
LEG 200	Legal Ethics	3
LEG 202	Litigation	3
LEG 203	Law Office Technology	3
^ LEG 204	Legal Writing	3
	Locally Determined Courses	12

Associate of Applied Science – Distance Education

To earn this degree, you must have 64 credits in the following areas:

General Education Core	19
Professional/Technical Core	33
Locally Determined Courses	12

General Education (19 Credits)

COM 101	Fundamentals of Public Speaking	3
or		
COM 102	Introduction to Interpersonal Communication	3
ENG 111	English Composition	3
ENG 112	Exposition and Persuasion	3
or		
ENG 211	Technical Writing	3
IVY 1XX	Life Skills Elective	1
** MAT 1XX	Intermediate Algebra or Higher	3
* XXX XXX	Humanities/Social Sciences Elective	3
* XXX XXX	Life/Physical Sciences Elective	3

Professional/Technical (33 credits)

CIS 101	Introduction to Microcomputers	3
LEG 101	Introduction to Paralegal Studies	3
LEG 102	Legal Research	3
LEG 103	Civil Procedures	3
LEG 106	Tort Law	3
LEG 107	Contracts and Commercial Law	3
LEG 108	Property Law	3
LEG 200	Legal Ethics	3
LEG 202	Litigation	3
LEG 203	Law Office Technology	3
^ LEG 204	Legal Writing	3

Electives (12 credits)

Choose four from this list of courses

LEG 205	Business Associations	3
LEG 209	Family Law	3
LEG 210	Wills, Trusts and Estates	3
LEG 211	Criminal Law and Procedure	3
LEG 280	Internship	3
LEG XXX	Paralegal Elective	3

IVY TECH
COMMUNITY
COLLEGE

Paramedic Science

Program Description
Does the idea of being an emergency first-responder make your heart beat a little faster? Are you an emergency medical technician who wants to get to the next level of emergency care and job opportunity? Then our Paramedic Science program may be for you. Through clinical and practical instruction as well as a field internship, you'll be prepared to function in the uncontrolled environment of emergency medicine in the pre-hospital setting. Upon completion, you'll qualify for state certification as an emergency medical technician-paramedic. Already a certified paramedic? Take just seven general education courses, and you'll earn an Associate of Science degree that transfers into four-year degree programs.

Sample Careers
EMT, paramedic

Degrees Available
Associate of Science, Associate of Applied Science

Concentrations Offered
None

Availability of concentrations and degrees varies by campus. Contact your local campus for more information. See page 8 for contact information.

Associate of Science
Articulated transfer through an Associate of Science in Paramedic Science is available with the University of Southern Indiana. To view the Associate of Science transfer degree program and to see if it is available at your local Ivy Tech campus, students should go to *http://www.ivytech.edu/*.

Students are encouraged to review these options with their advisors, to consult the current catalog of the institution to which they wish to transfer, and to contact the institution to which they wish to transfer. Additional opportunities for course and program transfer may also be available at your local campus. Students should contact the transfer office of their local Ivy Tech for further information.

Associate of Applied Science/Associate of Science
To earn this degree, you must have 66.5 credits in the following areas:

General Education Core	19
Professional/Technical Core	47.5

General Education (19 Credits)

	ANP 101	Anatomy and Physiology I	3
	ANP 102	Anatomy and Physiology II	3
*	COM XXX	Communications Elective	3
	ENG 111	English Composition	3
	IVY 1XX	Life Skills Elective	1
*	MAT 1XX	Intermediate Algebra or Higher	3
	XXX XXX	Humanities/Social Science Elective	3

Professional/Technical (47.5 credits)

PAR 102	Emergency Medical Technician - Basic Training	7.5
PAR 111	Preparatory	3
PAR 112	Prehospital Pharmacy	3
PAR 115	Airway, Patient Assessment	3.5
PAR 116	Clinical I	1.5
PAR 200	Trauma	3
PAR 210	Medical I	6
PAR 213	Medical II	5
PAR 215	Special Considerations	3.5
PAR 216	Clinical II	1.5
PAR 219	Clinical III	1.5
PAR 220	Operations	2.5
^ PAR 221	Ambulance Internship	6

IVY TECH
COMMUNITY
COLLEGE

Physical Therapist Assistant

Program Description

If you like to help people and want to work in the medical field, our Physical Therapist Assistant program may be for you. The PTA program will prepare you to work, under the supervision of a physical therapist, with physically impaired persons to help reverse adverse effects of physical disability. The therapist and assistant work together to provide appropriate therapeutic intervention and communication within the health care team. You will learn to administer therapeutic and psychosocial support for individuals with musculoskeletal, neurological, cardiopulmonary, vascular or other physiological dysfunctions.

Sample Careers
Physical Therapist Assistant

Degrees Available
Associate of Science

Concentrations Offered
None

Availability of concentrations and degrees varies by campus. Contact your local campus for more information. See page 8 for contact information.

Associate of Science

To earn this degree, you must have 67.5 credits in the following areas:

General Education Core	25
Professional/Technical Core	42.5

General Education (25 Credits)

ANP 101	Anatomy and Physiology I	3
ANP 102	Anatomy and Physiology II	3
COM 101	Fundamentals of Public Speaking	3
or		
COM 102	Introduction to Interpersonal Communication	3
ENG 111	English Composition	3
IVY 1XX	Life Skills Elective	1
MAT 111	Intermediate Algebra	3
PSY 101	Introduction to Psychology	3
SOC 111	Introduction to Sociology	3
SCI 111	Physical Science	3

Professional/Technical (42.5 credits)

PTA 101	Introduction to Physical Therapist Assistant	3
PTA 102	Diseases, Trauma, and Terminology	3
PTA 103	Administrative Aspects of Physical Therapist Assisting	3
PTA 106	PTA Treatment Modalities I	5
PTA 107	Kinesiology	5
PTA 115	Clinical I	2.5
PTA 205	Clinical II	5
PTA 207	PTA Treatment Modalities II	5
PTA 215	Clinical III	5
PTA 217	PTA Treatment Modalities III	5
^ PTA 224	Current Issues and Review	1

Practical Nursing

Program Description

The licensed practical nurse (LPN) is an integral part of the health care team. The Practical Nursing program leads to a Technical Certificate and can be completed in approximately one year. The accredited program will prepare you to care for patients in a variety of health care settings, such as hospitals, convalescent centers, clinics, home care and physicians' offices. Graduates are eligible to take the state licensure exam to become a licensed practical nurse.

Sample Careers
LPN, LPVN

Degrees Available
Technical Certificate

Concentrations Offered
None

Availability of concentrations and degrees varies by campus. Contact your local campus for more information. See page 8 for contact information.

Pre-Engineering

Technical Certificate

To earn this degree, you must have 43 credits in the following areas:

General Education Core	13
Professional/Technical Core	30

General Education (13 Credits)

!*	ANP 101 Anatomy and Physiology I	3
!*	ANP 102 Anatomy and Physiology II	3
!*	ENG 111 English Composition	3
	IVY 1XX Life Skills Elective	1
!*	PSY 101 Introduction to Psychology	3

Professional/Technical (30 credits)

	NSG 100 Fundamentals of Nursing	3
X	NSG 101 Fundamentals of Nursing Lab	1
	NSG 102 Medical-Surgical Nursing I	2
	NSG 103 Medical-Surgical Nursing I Lab	2
	NSG 105 Medical-Surgical Nursing I Clinical	2
	NSG 106 Pharmacology for Nursing	3
	NSG 110 Medical Surgical Nursing II	3
	NSG 111 Medical Surgical Nursing II Clinical	2
	NSG 112 Maternal-child Nursing	3
	NSG 113 Maternal-child Nursing Clinical	2
	NSG 114 Health Care Concepts in Nursing	1
^	NSG 116 Geriatric/Complex Medical Surgical Nursing III for the Practical Nurse	4
	NSG 117 Geriatric/Complex Medical Surgical Nursing III for the Practical Nurse Clinical	2

Symbol Key

^ Capstone Course

X Advanced placement may be available for Certified Nursing Assistant – see program chair

!* Courses must be successfully completed before admittance to the program

Program Description

The program is designed to prepare you for transfer to baccalaureate degree programs in engineering. The program curriculum will provide a strong foundation in science, math and technology. Special emphasis is placed on qualitative and quantitative analytical skills necessary in engineering design and problem solving while working in a cooperative team environment. Skills and knowledge can be applied to a wide range of baccalaureate engineering specialties including Electrical, Mechanical, Civil, Industrial, and Chemical engineering. The program will also focus on the applied aspects of science and engineering.

Sample Careers
Transfer degree

Degrees Available
Associate of Science

Concentrations Offered
None

Availability of concentrations and degrees varies by campus. Contact your local campus for more information. See page 8 for contact information.
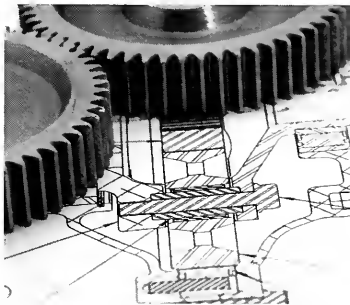
Associate of Science

To earn this degree, you must have 67 credits in the following areas:

General Education Core	40-43
Professional/Technical Core	24-27

General Education (40-43 Credits)

CHM 105	General Chemsitry I	5
COM 101	Fundamentals of Public Speaking	3
ENG 111	English Composition	3
ENG 112	Exposition and Persuasion (USI only)	3
IVY 1XX	Life Skills Elective	1
MAT 211	Calculus I	4
MAT 212	Calculus II	4
MAT 261	Multivariate Calculus (Calculus III-USI)	4
MAT 264	Differential Equations (Differential Equations-USI)	3
PHY 220	Mechanics	5
PHY 221	Heat, Electricity and Optics	5
XXX XXX	Humanties/Social Sciences elective	3

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Professional/Technical (24-27 credits)

EGR 116	Geometric Modeling for Visualization	2
EGR 140	Introduction to Engineering I	3
EGR 160	Introduction to Engineering II	3
EGR 190	Introduction to Engineering Design	2
EGR 251	Electrical Circuits I	4
EGR 252	Electrical Circuits II	4
EGR 260	Vector Mechanics-Statics	3
EGR 261	Dynamics	3
EGR 270	Engineering Project Management (IU-C only)	3

IVY TECH
COMMUNITY
COLLEGE

Professional Communication

Program Description

The Professional Communication program provides you with a rich background in the arts and sciences. This background will equip you with problem solving skills, communication and writing abilities, and experience in communicating and designing texts using information technologies.

Sample Careers

Executive assistant, writer

Degrees Available

Associate of Science

Concentrations Offered

None

Availability of concentrations and degrees varies by campus. Contact your local campus for more information. See page 8 for contact information.

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Associate of Science

To earn this degree, you must have 64 credits in the following areas:

General Education Core	31
Professional/Technical Core	33

General Education (31 Credits)

COM 101	Fundamentals of Public Speaking	3
ENG 111	English Composition	3
ENG 112	Exposition and Persuasion	3
IVY 1XX	Life Skills Elective	1
MAT 111	Intermediate Algebra	3
XXX XXX	Science Elective	3
XXX XXX	Social Services Electives	6
XXX XXX	Humanities Electives	9

Professional/Technical (33 credits)

BUS 101	Introduction to Business	3
CIS 101	Introduction to Microcomputers	3
COM 102	Introduction to Interpersonal Communication	3
COM 201	Introduction to Mass Communication	3
COM 202	Small Group Communication	3
COM 211	Fundamentals of Public Relations	3
ENG 205	Creative Writing	3
ENG 211	Technical Writing	3
PSY 101	Introduction to Psychology	3
VIS 101	Fundamentals of Design	3
VIS 115	Introduction to Computer Graphics	3

IVY TECH
COMMUNITY COLLEGE

Public Safety

Program Description

The Public Safety Technology program is designed to meet the ongoing needs of municipalities, students, business, and industries. The program will develop your technical skills, general knowledge, critical thinking, and problem solving abilities. Broad-based technical skills and critical thinking processes will assist you in adapting to changes in the work environment and promoting successful advancement on the job

Sample Careers

Public safety specialist, firefighter, environmental safety specialist

Degrees Available

Associate of Applied Science, Technical Certificate

Concentrations Offered

Environmental Health and Safety, Fire Science, Hazardous Materials, Public Administration

Availability of concentrations and degrees varies by campus. Contact your local campus for more information. See page 8 for contact information.

Associate of Applied Science

To earn this degree, you must have 60-66 credits in the following areas:

General Education Core	19
Professional/Technical Core	18-19
Concentration Courses	24-28
Locally Determined Courses	12-13

General Education (19 Credits)

** BIO 101	Introductory Biology	3
or		
** SCI 111	Physical Science	3
CHM 101	Introductory Chemistry I	3
** COM 101	Fundamentals of Public Speaking	3
or		
** COM 102	Introduction to Interpersonal Communication	3
ENG 111	English Composition	3
IVY 1XX	Life Skills Elective	1
MAT 1XX	Intermediate Algebra or Higher	3
POL 101	Introduction to American Government and Politics	3
or		
POL 220	Public Administration	3

Professional/Technical (18-19 credits)

PST 116	Hazardous Materials Control	3
or		
PST 117	Hazardous Materials	4
PST 120	First Responder	3
PST 121	Risk Management	3
PST 220	Incident Management Systems	3
PST 221	Computer Design and Planning	3
TEC 104	Computer Fundamentals for Technology	3

Choose One of the Following Concentrations

Environmental Health and Safety Concentration
(24credits)

This concentration prepares you to work in state and local agencies, waste water facilities, private companies and labs where they often test samples in lab environments, monitor air and water quality and advise on nature conservation strategies, site management, species protection, urban and rural development, and pest control.

ENV 101	Introduction to Environmental Technology	3
ENV 102	Environmental Management	3
ENV 110	Environmental Toxicology	3
∧ HMT 200	Environmental Protection Agency (EPA) Regulations	3
	Locally Determined Courses	12

Fire Science Concentration (27-28 credits)

This concentration prepares you to work in public and industrial fire departments and at airports and fire protection agencies where they often respond to and put out fires, operate emergency equipment and investigate fires

AFS 102	Fire Apparatus and Equipment	3
AFS 103	Firefi ghting Strategy and Tactics	3
AFS 201	Fire Protection Systems	3
∧ AFS 202	Fire Service Management	3
AFS 204	Fire Service Hydraulics	3
	Locally Determined Courses	12-13

Hazardous Materials Concentration (24 credits)

This concentration prepares you to work in fire departments, spill recovery companies, environment companies or government agencies.

HMT 100	OSHA Regulations	3
HMT 104	HAZ-MAT Health Effects	3
∧ HMT 200	Environmental Protection Agency (EPA) Regulations	3
HMT 220	Hazardous Materials Recovery, Incineration, and Disposal	3
	Locally Determined Courses	12

Public Administration Concentration (24 credits)

The Public Administration specialty prepares you to work in local, city and state government agencies where you might support city managers of other public administrators.

BUS 105	Principles of Management	3
BUS 208	Organizational Behavior	3
∧ OPM 224	Operations Management	3
POL 112	State and Local Government	3
	Locally Determined Courses	12

Technical Certificate—Fire Science

To earn this degree, you must have 31 credits in the following areas:

General Education Core	7
Professional/Technical Core	3
Specialty Courses	6
Locally Determined Courses	15

General Education (7 Credits)

ENG 111	English Composition	3
IVY 1XX	Life Skills Elective	1
POL 101	Introduction to American Government and Politics	3

Professional/Technical (3 credits)

TEC 104	Computer Fundamentals for Technology	3

Other Required Courses (21 credits)

AFS 103	Firefighting Strategy and Tactics	3
AFS 201	Fire Protection Systems	3
	Regionally Determined Courses	15

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IVY TECH
COMMUNITY
COLLEGE

Radiation Therapy

Program Description

This newest degree track brings another strong addition to Ivy Tech's commitment to the growth our Life Science initiatives through education and professional development in our community. The Radiation Therapy program provides didactic and clinical education opportunities for individuals who enjoy significant patient interaction and close patient/professional relationships. Clinical practice occurs at our partnering medical centers and oncology clinics throughout Indiana.

Sample Careers
Radiation Therapist

Degrees Available
Associate of Science

Program statement: The Respiratory Care program is accredited by the Commission on Accreditation of the Allied Health Education Program (CAAHEP), in collaboration with the Committee on Accreditation for Respiratory Care (CoARC), 1248 Harwood Road; Bedford, TX, 76021, 1-817-283-2835, http://wire.coarc.com/.

Availability of concentrations and degrees varies by campus. Contact your local campus for more information. See page 8 for contact information.

Associate of Science
To earn this degree, you must have 70 credits in the following areas:

General Education Core	26
Professional/Technical Core	44

General Education (26 Credits)

ANP 101	Anatomy and Physiology I	3
ANP 102	Anatomy and Physiology II	3
COM 101	Fundamentals of Public Speaking	3
or		
COM 102	Introduction to Interpersonal Communication	3
ENG 111	English Composition	3
IVY 1XX	Life Skills Elective	1
MAT 13X	Mathematics Elective	3
PSY 101	Introduction to Psychology	3
PHY 101	Physics I	4
XXX XXX	Humanities Elective	3

Professional/Technical (44 credits)

HHS 101	Medical Terminology	3
RTT 100	Introduction to Radiation Therapy	2
RTT 145	Clinical Externship I	1
RTT 150	Patient Care Radiation Oncology	3
RTT 155	Clinical Externship II	3
RTT 220	Techniques and Applications in Radiation Therapy	3
RTT 223	Radiobiology and Safety	2
RTT 225	Clinical Externship III	4
RTT 230	Pathology and Treatment Principles I	2
RTT 233	Research Methodology in Radiation Oncology	1
RTT 235	Clinical Externship IV	5
RTT 240	Pathology and Treatment Principles II	2
RTT 241	Treatment Planning	3
RTT 242	Quality Management in Radiation Oncology	2
^ RTT 243	Radiation Therapy Capstone Course	2
RTT 245	Clinical Externship V	3
RTT 262	Radiation Therapy Physics	3

Radiologic Technology

Program Description

A radiologic technologist is someone who specializes in using x-rays to create images of the body. The radiographs that are produced by the radiographer enable the doctor to diagnose the patient for disease, fractures, or any irregularities. Therefore, as a radiographer, you must be a professional skilled in the art and science of radiography and able to apply scientific knowledge, problem-solving techniques, and use high-tech equipment, while providing quality patient care. Technologists are in demand in hospitals, clinics, physicians' and dentists' offices.

Sample Careers
Radiologic Technologist

Degrees Available
Associate of Science

Concentrations Offered
None

Availability of concentrations and degrees varies by campus. Contact your local campus for more information. See page 8 for contact information.

Recreation Vehicle Service Technology

Associate of Science

To earn this degree, you must have 77 credits in the following areas:

General Education Core	19
Professional/Technical Core	58

General Education (19 Credits)

#	ANP 101 Anatomy and Physiology I	3
#	ANP 102 Anatomy and Physiology II	3
#	COM 101 Fundamentals of Public Speaking	3
	or	
#	COM 102 Introduction to Interpersonal Communication	3
#	ENG 111 English Composition	3
	IVY 1XX Life Skills Elective	1
#	MAT 131 Algebra/Trigonometry I	3
	or	
	MAT 136 College Algebra	3
#**	PSY 101 Introduction to Psychology	3
	or	
#**	SOC 111 Introduction to Sociology	3

Professional/Technical (58 credits)

#	CIS 101 Introduction to Microcomputers	3
#	HHS 101 Medical Terminology	3
	RAD 111 Orientation and Patient Care	4
	RAD 112 Image Production and Evaluation I	3
	RAD 113 Radiographic Positioning I and Lab	3
	RAD 114 Radiographic Clinical Education I	3
	RAD 115 Radiographic Positioning II and Lab	3
	RAD 116 Radiographic Clinical Education II	4
	RAD 117 Radiation Physics and Equipment Operation	3
	RAD 201 Radiographic Positioning III and Lab	3
	RAD 202 Radiographic Clinical Education III	4
	RAD 203 Radiographic Clinical Education IV	4
	RAD 204 Radiographic Clinical Education V	4
	RAD 206 Radiobiology and Radiation Protection	3
	RAD 209 Radiographic Positioning IV and Lab	3
	RAD 218 Image Production and Evaluation II	2
	RAD 221 Pharmacology and Advanced Procedures	3
^	RAD 299 General Examination Review	3

Courses must be successfully completed before applying to the program.

Program Description

Not everyone owns one, but recreational vehicles (RVs) still need to be serviced and maintained. If you like working on passenger cars, you might also enjoy servicing these larger vehicles. The Recreational Vehicle Service Technology program prepares you for a job in the field of recreational vehicle repair and service. You will develop knowledge of topics such as electrical concepts, braking, suspension and towing, and interior and exterior coaches.

Sample Careers
RV service technician

Degrees Available
Associate of Applied Science, Technical Certificate

Concentrations Offered
None

Availability of concentrations and degrees varies by campus. Contact your local campus for more information. See page 8 for contact information.

Associate of Applied Science

To earn this degree, you must have 62 credits in the following areas:

General Education Core	19
Professional/Technical Core	43

General Education (19 Credits)

ENG 111	English Composition	3
ENG 211	Technical Writing	3
IVY 1XX	Life Skills Elective	1
MAT 111	Intermediate Algebra	3
XXX XXX	Life/Physical Science Elective	3
XXX XXX	Social Sciences/Humanities Elective	3
XXX XXX	General Education Elective	3

Professional/Technical (43 credits)

RVT 101	Introduction to RV Service/Customer Relations	2
RVT 102	Electrical Concepts	3
RVT 103	Fluid Power, Heat and Mechanical Systems	4
RVT 104	LP Gas	2
RVT 105	Electrical Systems Service	5
RVT 106	RV Braking, Suspension and Towing Systems	3
RVT 107	RV Air Conditioning and Absorption Refrigeration Service	4
RVT 108	Heating Systems/Accessory Installation and Service	3
RVT 109	Water Systems and Water Heating	2
RVT 110	Interior Coach	3
RVT 111	Exterior Coach	4
RVT 201	Metal Processing and Metallurgy	2
^ RVT 280	Co-op/Internship	3
TEC 104	Computer Fundamentals for Technology	3

Technical Certificate

To earn this degree, you must have 47 credits in the following areas:

General Education Core	7
Professional/Technical Core	40

RV Service Technology continued

General Education (7 Credits)

ENG 111	English Composition	3
IVY 1XX	Life Skills Elective	1
MAT 118	Concepts in Mathematics	3

Professional/Technical (40 credits)

RVT 101	Introduction to RV Service/Customer Relations	2
RVT 102	Electrical Concepts	3
RVT 103	Fluid Power, Heat and Mechanical Systems	4
RVT 104	LP Gas	2
RVT 105	Electrical Systems Service	5
RVT 106	RV Braking, Suspension and Towing Systems	3
RVT 107	RV Air Conditioning and Absorption Refrigeration Service	4
RVT 108	Heating Systems/Accessory Installation and Service	3
RVT 109	Water Systems and Water Heating	2
RVT 110	Interior Coach	3
RVT 111	Exterior Coach	4
RVT 201	Metal Processing and Metallurgy	2
TEC 104	Computer Fundamentals for Technology	3

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IVY TECH
COMMUNITY
COLLEGE

Respiratory Care

Program Description
Respiratory therapists are health care specialists who provide care for patients with breathing disorders. Care includes assessment, evaluation, and treatment of patients ranging in age from premature infants to the elderly. Therapists also work with adults who have chronic lung problems, such as asthma or emphysema. As a respiratory therapist, you must possess good communication skills. You will work side by side with physicians, nurses and other health care providers in caring for patients with lung disorders. As part of the health care team, you help with interviewing patients, making recommendations to physicians to change therapy based on your assessments, and providing patient and family education about lung disease.

Sample Careers
Respiratory therapist

Degrees Available
Associate of Science

Concentrations Offered
None

Availability of concentrations and degrees varies by campus. Contact your local campus for more information. See page 8 for contact information.

The Respiratory Care program is accredited by the Commission on Accreditation of the Allie Health Education Programs (CAAHEP), in collaboration with the Committee on Accreditation for Respiratory Care (CoARC), 1248 Harwood Rd.; Bedford, TX, 76201, (817) 283-2835, http://coarc.com.

Associate of Science
To earn this degree, you must have 71-73 credits in the following areas:

General Education Core	25-27
Professional/Technical Core	46

General Education (25-27 Credits)

	ANP 101	Anatomy and Physiology I	3
	ANP 102	Anatomy and Physiology II	3
**	BIO 2XX	Microbiology Elective	3-4
*	COM 101	Fundamentals of Public Speaking	3
	or		
*	COM 102	Introduction to Interpersonal Communication	3
**	CHM 1XX	Chemistry Elective	3-4
	ENG 111	English Composition	3
	IVY 1XX	Life Skills Elective	1
	MAT 118	Concepts in Mathematics	3
	PSY 101	Introduction to Psychology	3
	or		
	SOC 111	Introduction to Sociology	3

Professional/Technical (46 credits)

	RES 121	Introduction to Respiratory Care	6
	RES 122	Therapeutic Modalities	3
	RES 123	Cardiopulmonary Physiology	3
	RES 124	Practicum I	2
	RES 125	Critical Care I	3
	RES 126	Clinical Medicine I	3
	RES 127	Practicum II	2
	RES 128	Practicum III	5
	RES 129	Respiratory Pharmacology	3
	RES 221	Cardiopulmonary Diagnostics	4
	RES 222	Critical Care II	3
	RES 224	Clinical Medicine II	3
^	RES 226	Continuing Care	2
	RES 227	Practicum IV	3
	RES 229	Emergency Management	1

Surgical Technology

Program Description
A career in surgical technology is very fast-paced and challenging. You may be able to hold a beating heart in your hand. You may be part of a team in the OR that works on replacing a total hip or knee in the orthopedic rotation at your site. You will certainly hand many different instruments to the surgeon in the correct fashion and at the correct time. You will be the keeper of the sterile field. This is a very rewarding career in the Health Science Field. It is not nursing; you do a very specific technical job and work under the RN and Surgeon. This degree is designed to allow you to add nursing courses and graduate with an ASN that allows you to take the exam to become an RN.

Sample Careers
Surgical Technologist

Degrees Available
Associate of Science, Associate of Applied Science

Concentrations Offered
None

Availability of concentrations and degrees varies by campus. Contact your local campus for more information. See page 8 for contact information.

Associate of Science
Articulated transfer through an Associate of Science in Surgical Technology is available with IUPU-FW. To view these Associate of Science transfer degree programs and to see if they are available at your local Ivy Tech campus, students should go to *http://www.ivytech.edu/*.

Students are encouraged to review these options with their advisors, to consult the current catalog of the institution to which they wish to transfer, and to contact the institution to which they wish to transfer. Additional opportunities for course and program transfer may also be available at your local campus. Students should contact the transfer office of their local Ivy Tech for further information

Associate of Applied Science
To earn this degree, you must have 68-69 credits in the following areas:

General Education Core	19
Professional/Technical Core	49-50

General Education (19 Credits)

ANP 101	Anatomy and Physiology I	3
ANP 102	Anatomy and Physiology II	3
* COM 101	Fundamentals of Public Speaking	3
or		
* COM 102	Introduction to Interpersonal Communication	3
ENG 111	English Composition	3
IVY 1XX	Life Skills Elective	1
* MAT 1XX	Mathematics Elective	3
* PSY 101	Introduction to Psychology	3
or		
* SOC 111	Introduction to Sociology	3

Professional/Technical (49-50 credits)

BIO 2XX	General Microbiology	3-4
HHS 101	Medical Terminology	3
HHS 105	Medical Law and Ethics	3
SUR 111	Fundamentals of Surgical Technology	4
SUR 112	Application of Surgical Fundamentals	2
SUR 113	Surgical Procedures I	3
SUR 114	Clinical Applications I	3
SUR 211	Surgical Procedures II	6
SUR 212	Clinical Applications II	9
^ SUR 213	Surgical Procedures III	3
^ SUR 214	Clinical Applications III	7
XXX XXX	Pharmacology	3

Therapeutic Massage

Program Description

The Therapeutic Massage program addresses the theory and hands-on techniques of therapeutic massage. Massage skills include assessment, relaxation massage, therapeutic massage, deep tissue, sports massage, hyrotherapies, applications for special populations including pregnant women, children, geriatrics and the disabled. Anatomy, physiology, disease conditions, pharmacology and their effects on the body alone and during massage applications are studied thoroughly, to promote understanding of massage indications and contraindications. Psychological and emotional issues, legal and ethical aspects, and business development are addressed. The program is designed to prepare you for beginning entry into the massage profession, with an emphasis on working within the wellness community.

Sample Careers
Massage therapist

Degrees Available
Associate of Applied Science, Technical Certificate

Concentrations Offered
None

Availability of concentrations and degrees varies by campus. Contact your local campus for more information. See page 8 for contact information.

Completion of the Technical Certificate provides the student in excess of 700 hours of training and preparation to sit for the NCBTMB (National Certification Board for Therapeutic Massage and Bodywork) National Certification Exam. Completion of the AAS degree provides the student in excess of 1000 hours of preparation to sit for the National Certification Exam.

Associate of Applied Science
To earn this degree, you must have 67 credits in the following areas:

| General Education Core | 19 |
| Professional/Technical | 48 |

General Education (19 Credits)

ANP 101	Anatomy and Physiology I	3
ANP 102	Anatomy and Physiology II	3
ENG 111	English Composition	3
IVY 1XX	Life Skills Elective	1
MAT 1XX	Mathematics Elective	3
XXX XXX	Humanities/Social Science Elective	3
XXX XXX	English/Communications Elective	3

Professional/Technical (48 credits)

HHS 101	Medical Terminology	3
TMA 101	Holistic Approach to Massage Therapy	3
TMA 102	Legal Massage Applications	3
TMA 120	Massage Technician Training I	3
TMA 122	Massage Financial Management	3
TMA 125	Acupressure Theory and Methods	3
TMA 140	Massage Technician Training II	3
TMA 141	Massage Through the Life Span	3
TMA 201	Sports, Injuries and Hydrotherapies	3
TMA 202	Deep Tissue	3
TMA 203	Herbs, Drugs and Massage	3
TMA 205	Pathology and Massage	3
TMA 210	Biomechanics	3
∧ TMA 220	Advanced Techniques	3
TMA 221	Business Development	3
TMA XXX	Massage Elective	3

Technical Certificate
To earn this degree, you must have 49 credits in the following areas:

| General Education Core | 10 |
| Professional/Technical | 39 |

General Education (10 Credits)

ANP 101	Anatomy and Physiology I	3
ANP 102	Anatomy and Physiology II	3
IVY 1XX	Life Skills Elective	1
XXX XXX	English/Communications Elective	3

Professional/Technical (39 credits)

HHS 101	Medical Terminology	3
TMA 101	Holistic Approach to Massage Therapy	3
TMA 102	Legal Massage Applications	3
TMA 120	Massage Technician Training I	3
TMA 122	Massage Financial Management	3
TMA 125	Acupressure Theory and Methods	3
TMA 140	Massage Technician Training II	3
TMA 141	Massage Through the Life Span	3
TMA 201	Sports, Injuries and Hydrotherapies	3
TMA 203	Herbs, Drugs and Massage	3
TMA 205	Pathology and Massage	3
TMA 210	Biomechanics	3
TMA XXX	Massage Elective	3

IVY TECH
COMMUNITY
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Transportation, Distribution and Logistics

Program Description

Transportation and logistics is a major industry in Indiana. Many companies now depend on their ability to accurately move goods around the world. Ivy Tech Community College's Transportation, Distribution and Logistics program prepares a workforce that meets this demand. Indiana's central location and access to national and world markets has attracted a large increase in the companies in the transportation, distribution and logistics arena.

The logistics and transportation field uses high technology and information systems to track goods and increase efficiencies. There are many opportunities for careers in transportation and logistics management using the latest technologies in supply management, distribution systems, and inter-modal transportation.

Sample Careers
Shipping/receiving clerk, cargo and freight agent, first line supervisor

Degrees Available
Associate of Science

Concentrations Offered
None

Availability of concentrations and degrees varies by campus. Contact your local campus for more information. See page 8 for contact information.

Associate of Science

To earn this degree, you must have 64 credits in the following areas:

General Education Core	31
Professional/Technical Core	33

General Education (31 Credits)

COM 101	Fundamentals of Public Speaking	3
ECN XXX	Economics Elective	3
ENG 111	English Composition	3
GEO 207	World Geography	3
IVY 1XX	Life Skills Elective	1
MAT 131	Algebra/Trigonometry I	3
MAT 132	Algebra/Trigonometry II	3
PHL 102	Introduction to Ethics	3
PSY 101	Introduction to Psychology	3
SOC 111	Introduction to Sociology	3
XXX XXX	Life/Physical Sciences Elective	3

Professional/Technical (33 credits)

ACC 101	Financial Accounting	3
BUS 101	Introduction to Business	3
BUS 102	Business Law	3
BUS 105	Principles of Management	3
BUS 227	Logistics/Supply Chain Management	3
BUS 228	Principles of Purchasing	3
BUS 229	Transportation Systems	3
BUS 230	Business Statistics	3
CIS 101	Introduction to Microcomputers	3
MKT 101	Principles of Marketing	3
OPM 224	Operations Management	3

Visual Communication

Program Description

Visual Communications students are provided with all the skills necessary to work in the design industry. You will develop advanced skills and knowledge in your particular field of interest. The program prepares you for the world of work by developing real-world internship and design exhibit opportunities. You will also develop a professional print and media portfolio that will be critiqued by local industry representatives. You will take part in mock interviews with these representatives and get important feedback on what it takes to get a job in the design field.

Sample Careers
Camera operator, graphic designer, production assistant, webmaster

Degrees Available
Associate of Science, Associate of Applied Science

Concentrations Offered
Film and Video, Graphic Design, Multimedia Production Photography, Web Design, Web Development

Visual Communication continued

Associate of Science

Articulated transfer through an Associate of Science in Visual Communications is available with IUPUI and the University of Southern Indiana. To view this Associate of Science transfer degree program and to see if they are available at your local Ivy Tech campus, students should go to http://www.ivytech.edu/.

Students are encouraged to review these options with their advisors, to consult the current catalog of the institution to which they wish to transfer, and to contact the institution to which they wish to transfer. Additional opportunities for course and program transfer may also be available at your local campus. Students should contact the transfer office of their local Ivy Tech for further information

Associate of Applied Science

To earn this degree, you must have 67 credits in the following areas:

General Education Core	19
Professional/Technical Core	24
Concentration Core	12
Locally Determined Courses	12

General Education (19 Credits)

	ARH 101	Survey of Art and Culture I	3
	ARH 102	Survey of Art and Culture II	3
*	COM 101	Fundamentals of Public Speaking	3
	or		
*	COM 102	Introduction to Interpersonal Communication	3
	ENG 111	English Composition	3
	IVY 1XX	Life Skills Elective	1
*	MAT 1XX	Math Elective	3
*	XXX XXX	Life/Physical Science Elective	3

Professional/Technical (24 credits)

VIS 101	Fundamentals of Design	3
VIS 102	Fundamentals of Imaging	3
VIS 110	Web Design I	3
VIS 115	Introduction to Computer Graphics	3
VIS 201	Electronic Imaging	3
VIS 205	Business Practices for Visual Artists	3

^ VIS 207	Portfolio Preparation	3
VIS 213	Advanced Electronic Imaging	3

Choose One of the Following Concentrations

Film and Video Concentration (24 credits)
This concentration exposes you to a broad technical core of courses representing key topics such as organizing the visual fields, color theory and application, image acquisition and manipulation technology. You will learn to operate television, video or motion picture cameras for various purposes.

VID 110	Production Editing I	3
VID 111	Studio and Field Production I	3
VID 202	Studio and Field Production II	3
VIS 105	Video and Sound	3
Locally Determined Courses		12

Graphic Design Concentration (24 credits)
This concentration involves creating 2D commercial designs for print. You will learn approaches for production, printing, planning, business issues, and web design and its relationship to print.

VIS 114	Graphic Design I	3
VIS 113	Typography	3
VIS 116	Electronic Illustration	3
VIS 217	Graphic Design II	3
Locally Determined Courses		12

Photography Concentration (24 credits)
This concentration will expose you to a broad technical core of courses representing key topics such as: organizing the visual field, color theory and application, image acquisition and manipulation technology, the computer as a powerful tool, the professional visual artist as a business person and exit portfolio.

PHO 104	Basic Photography	3
PHO 106	Studio Practices	3
PHO 107	Intermediate Photography	3
PHO 201	Principles of Color Photography	3
Locally Determined Courses		12

Web Design Concentration (24 credits)
This concentration provides you with approaches to developing interactive content for CD/DVDs and websites, addressing issues with production-quality digital video and sound editing. Enjoy creative problem-solving in your own interactive 3D environment.

VIS 113	Typography	3
VIS 114	Graphic Design I	3
VIS 116	Electronic Illustration	3
VIS 210	Web Design II	3
Locally Determined Courses		12

Web Development Concentration (24 credits)
This concentration will provide you with experience in both creative and technical areas. The latest technologies that are currently in high demand include website design, web development and interactive media.

CIS 125	Database Design and Management	3
VIS 103	Interactive Media I	3
VIS 113	Typography	3
VIS 210	Web Design II	3
Locally Determined Courses		12

IVY TECH
COMMUNITY
COLLEGE

COURSE DESCRIPTIONS

IVY TECH
COMMUNITY COLLEGE

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Comprehensive Course Description List (Alphabetical Order)

ABR 101 Body Repair I 3 Credits
Prerequisites: None. Examines the characteristics of body metals and includes the installation of moldings, ornaments, and fasteners with emphasis on sheet metal analysis and safety.

ABR 103 Automotive Paint Fundamentals 3 Credits
Prerequisites: None. Introduces auto paint considerations with emphasis on the handling of materials and equipment in modern automotive technologies.

ABR 104 Collision Damage Analysis and Repair 3 Credits
Prerequisites: None. Provides instruction in analyzing extensive body damage and determining the tools and procedures needed to replace panels.

ABR 105 Conventional Frame Diagnosis and Correction 3 Credits
Prerequisites: None. Covers the use of tools, frame machines and equipment for frame and chassis repair. Includes study of terms pertaining to front suspension and rear axle. Describes uses of frame gauges and other measuring devices.

ABR 106 Body Repair II 3 Credits
Prerequisites: ABR 101. Introduces fundamentals of using hand and power tools in the repair of minor collision damage, with emphasis on safety.

ABR 107 Automotive Painting Technology 3 Credits
Prerequisites: None. Provides instruction on the total refinishing of an automobile with emphasis on advanced and specialty painting techniques.

ABR 108 Unibody Structural Analysis and Repair 3 Credits
Prerequisites: None. Covers unibody repair, identification and analysis of damage, measuring and fixing systems, straightening systems and techniques, mechanical component service and knowledge of suspension and steering systems on front-wheel-drive unibody vehicles.

ABR 109 Collision Damage Appraising 3 Credits
Prerequisites: None. Provides instruction in analyzing extensive body damage and determining the tools and procedures needed to replace panels.

ABR 110 Auto Body Power Tools 3 Credits
Prerequisites: None. Covers diagnosis of problems associated with the use of power tools in auto body work.

ABR 111 Auto Body Hydraulic Tools 3 Credits
Prerequisites: None. Provides instruction in the selection, use and maintenance of hydraulic tools for auto body repair.

ABR 114 Collision Damage Lab 1 Credit
Prerequisites: ABR 104. Provides opportunities to develop skills and knowledge in the area of collision damage analysis and repair.

ABR 115 Auto Body Circuits 3 Credits
Prerequisites: None. Includes fundamentals of electrical theory, automotive components and circuits, and troubleshooting techniques. Emphasizes battery construction, function and operation.

ABR 117 Auto Paint Lab 1 Credit
Prerequisites: ABR 103 and ABR 107. Develops auto-painting skills with emphasis on materials and equipment handling.

ABR 120 Fiberglass Plastic Repair 3 Credits
Prerequisites: None. Introduces types of fiberglass and plastic materials used in auto body repair. Covers both interior and exterior applications.

ABR 121 Unibody Repair Lab 1 Credit
Prerequisites: None. Develops skills and knowledge in the area of unibody structural analysis and repairs.

ABR 122 Conventional Frame and Unibody Structural Analysis 3 Credits
Prerequisites: None. Includes the use of tools, frame machines and equipment for frame and chassis repair. Includes study of terms pertaining to front suspension and rear axle. Describes the uses of frame gauges, tram identification and other measuring and fixturing systems; straightening systems and techniques; mechanical component service and knowledge of suspension and steering systems on front wheel drive unibody vehicles.

ACC 090 Introduction to Accounting 3 Credits
Prerequisites: None. Introduces the basic principles of accounting as utilized in a variety of office settings. Includes the principles of debit and credit, double-entry bookkeeping, use of journals, and analyzing transactions. Uses of ledgers, posting procedures, petty cash, banking procedures, payroll, depreciation, work sheets, balance sheets, and income statements are covered as well.

ACC 101 Financial Accounting TransferIN 3 Credits
Prerequisites: Demonstrated competency through appropriate assessment or earning a grade of "C" or better in ENG 025, ENG 032 and MAT 044. Introduces the fundamental principles, techniques, and tools of financial accounting. The development and use of the basic financial statements pertaining to corporations both service and retail.

ACC 102 Managerial Accounting 3 Credits
Prerequisites: ACC 101. Emphasizes managerial accounting concepts, general versus cost accounting systems, cost behavior, cost-volume-profit analysis, budgeting, standard cost systems, responsibility accounting, incremental analysis, and capital investment analysis.

ACC 105 Income Tax 3 Credits
Prerequisites: Demonstrated competency through appropriate assessment or earning a grade of "C" or better in ENG 025, ENG 032 and MAT 044. Offers an overview of federal and state income tax law for individuals including taxable income, capital gains and losses, adjustments, standard and itemized deductions, tax credits and appropriate tax forms. Introduces tax concepts needed by a sole proprietorship.

ACC 106 Payroll Accounting 3 Credits
Prerequisites: Demonstrated competency through appropriate assessment or earning a grade of "C" or better in ENG 025, ENG 032 and MAT 044. Covers payroll calculating and reporting including various federal and state withholding taxes, employer payroll taxes, typical insurance and other arrangements affecting the preparation of payroll registers and employees' earnings records.

ACC 109 Personal Finance 3 Credits
Prerequisites: Demonstrated competency through appropriate assessment or earning a grade of "C" or better in ENG 025, ENG 032 and MAT 044. Examines the process of setting and achieving financial goals. Emphasizes managing financial resources, budgeting for current expenses, projecting cash flow and managing short- and long-term credit. Includes use of insurance to reduce risks and vehicles for saving and investing.

ACC 111 Financial Accounting Application 1 Credit
Prerequisites: Program Advisor Approval. Presents a series of planned accounting learning problems and activities designed to accompany concepts and theories included in a Financial Accounting Application course.

ACC 112 Managerial Accounting Application 1 Credit
Prerequisites: Program Advisor Approval. Presents a series of planned accounting learning problems and activities designed to accompany concepts and theories included in a Managerial Accounting Application course.

ACC 118 Financial Concepts for Accounting 3 Credits
Prerequisites: None. Surveys the applications of mathematics to vari-

ous business and accounting activities. Includes a brief review of basic mathematical operations and their subsequent application to such commercial activities as payroll, consumer finance, business borrowing, inventory control, pricing, depreciation, and time value of money.

ACC 122 Accounting Systems Applications 3 Credits
Prerequisites: ACC 101. Solves accounting problems using software similar to what is currently used in business. Includes installation, operation, and analysis of an accounting software package or packages.

ACC 201 Intermediate Accounting I 3 Credits
Prerequisites: ACC 102. Studies accounting principles and applications at an intermediate level pertaining to the income statement and balance sheet, cash and cash equivalents, receivables, inventories, plant assets and intangible assets, current and contingent liabilities, corrections of errors, and statement of cash flows. Included are analysis of bad debts, inventory valuation, repairs and maintenance, depreciation of plant assets and present value applications.

ACC 202 Intermediate Accounting II 3 Credits
Prerequisites: ACC 201. Continues studies of Intermediate Accounting I and includes long-term investments, long-term debt, stockholders' equity, special accounting problems and analysis, and financial statement analysis. Also included are corporate capital and treasury stock transactions, dividends, earnings per share, accounting for income taxes, and creation of financial statements from incomplete records.

ACC 203 Cost Accounting I 3 Credits
Prerequisites: ACC 102. Examines the manufacturing process in relation to the accumulation of specific costs of manufactured products. Studies various cost accounting report forms, material, labor control, and allocation of manufacturing costs to jobs and departments.

ACC 204 Cost Accounting II 3 Credits
Prerequisites: ACC 203. Studies the master or comprehensive budget, flexible budgeting and capital budgeting. Emphasizes tools for decision-making and analysis. Introduces human resource accounting.

ACC 206 Advanced Managerial Accounting 3 Credits
Prerequisites: ACC 102. Provides an intermediate understanding of accounting records and management decision making, with topics including internal accounting records and quantitative business analysis.

ACC 207 Accounting for Government and Nonprofit Entities 1 3 Credits
Prerequisites: ACC 101. Emphasizes the similarities and differences between government, nonprofit and commercial accounting methods and procedures. Exposes students to the basic fund accounting cycle for the general fund and other special funds.

ACC 208 Advanced Income Tax 3 Credits
Prerequisites: ACC 101 and ACC 105. Studies procedures and problems pertaining to federal and state income tax laws for partnerships and corporations. Includes a review and in-depth study of concepts related to proprietorships covered in Income Tax I.

ACC 209 Auditing 3 Credits
Prerequisites: ACC 201. Covers public accounting organization and operation including internal control, internal and external auditing, verification and testing of the balance sheet and operating accounts, and the auditor's report of opinion of the financial statements.

ACC 212 Business Finance 3 Credits
Prerequisites: ACC 101, BUS 101 and MAT 111. Introduces basic tools and techniques of financial analysis. Financial analysis includes but is not limited to the use of ratios, common size statements, and pro forma statements.

ACC 213 Advanced Spreadsheets 3 Credits
Prerequisites: OAD 218 and ACC 102. Continues the study of electronic spreadsheets in business. Emphasizes the advanced application of electronic spreadsheets.

ACC 217 Intermediate Accounting Applications I 1 Credit
Prerequisites: ACC 102. Presents a series of planned accounting learning problems and activities designed to accompany concepts and theories included in ACC 201. Uses computerized problems.

ACC 218 Intermediate Accounting Applications II 1 Credit
Prerequisites: ACC 102. Presents a series of planned accounting learning problems and activities designed to accompany concepts and theories included in Intermediate Accounting II. Uses computerized problems.

ACC 219 Cost Accounting Applications 1 Credit
Prerequisites: ACC 102. Presents a series of planned accounting learning problems and activities designed to accompany concepts and theories included in Cost Accounting I. Uses computerized problems.

ACC 225 Integrated Accounting Systems 3 Credits
Prerequisites: ENG 111 and MAT 111 or higher and ACC 201 and OAD 218. Uses integrated accounting software package(s) to illustrate computerized accounting practices. The general ledger will be integrated with accounts receivable, accounts payable, and other accounting modules.

ACC 280 Co-op/Internship 1-6 Credits
Prerequisites: Program Chair Approval. Provides students with the opportunity to work at a job site that is specifically related to their career objectives. Provides on-the-job experience while earning credit toward an associate degree.

ACC 298 Field Study 1-6 Credits
Prerequisites: Program Chair approval. Provides students with the opportunity to work at a job site that is specifically related to their career objectives. Provides on-the-job experience while earning credit toward an associate degree.

AFS 100 Fire Suppression 3 Credits
Prerequisites: None. Designed for non-firefighters. An introduction to the fire service. Terminology, history and basic firefighting skills are applied.

AFS 101 Fire Technology 3 Credits
Prerequisites: None. A general introduction to the study of fire science. This course examines the history and growth of the fire service from its beginning to modern day firefighting. Students will cover the life safety code (NFPA-101), fire protection systems, firefighter safety and survival, along with identifying and analyzing the fire problems we face in the fire service today. This course will also cover what fire is, the chemical hazards of combustion and related by-products of fire. Fire department organization, administration, operations, and basic strategies and tactics will be covered.

AFS 102 Fire Apparatus and Equipment 3 Credits
Prerequisites: None. Examines in detail the various types of apparatus on the market today. Study is made of pumpers, aerials, elevating platforms and special apparatus. The students utilizing NFPA standards 1901, 1904, and 1500, will identify the proper chapters on a given situation. Topics will include: apparatus placement on an emergency incident, types of pumps, tests, equipment, drafting, relay, nozzles, fittings and hose lays, and maintenance on various types of apparatus.

AFS 103 Fire Fighting Strategy and Tactics 3 Credits
Prerequisites: None. Prepares students to make responsible decisions concerning fire ground strategies and tactics at the company level. Areas covered include pre-incident planning and size up. Also, the student will learn basic building construction, fire -behavior, fire control, fireground factors, fire stream management and support activities. Responsibilities of engine and ladder companies are discussed. Emphasis is placed on safety in all the above areas. Command scenarios are used throughout the course.

AFS 104 Building Construction Fire Service 3 Credits
Prerequisites: None. Examines the design principles involved in the protection of a structure from fire involvement. Additionally, the signs, symptoms, and indicators of partial or total building collapse during fire-fighting operations are studied. The course includes the study of legislative codes and laws concerning the following: building design, building fire safety, classification of building construction, blueprint reading, plan review and in-house fixed fire protection.

AFS 105 Fire /Arson Investigation   3 Credits
Prerequisites: None. Focuses on the responsibility of the firefighter, the investigator, and the department in fire scene investigations. Includes fire cause and loss, collection and preservation of evidence and determination of fire origin, with emphasis on the application of various scientific aids that assist in investigations.

AFS 106 Fire/Arson Investigator   4 credits
Prerequisites: Demonstrated competency through appropriate assessment or earning a grade of "C" or better in MAT 040 and ENG 032. Focuses on the responsibility of the firefighter, the investigator, and the department in fire scene investigations. Fire cause and loss, collection and preservation of evidence and determination of fire origin will be studied. Emphasis will be placed on the application of various scientific aids that assist in investigations. Hands on labs with property and vehicle investigations will be included. On completion of this course the student is eligible to take the national testing certification for Fire Investigator I.

AFS 108 Fire Inspection/Code Enforcement   3 Credits
Prerequisites: None. Examines the function of the fire inspector and organization of the fire prevention unit. Emphasizes the identification of the various codes and regulations utilized by the inspector, with special attention given to the Indiana Fire Code and IFSTA Fire Inspection and Code Enforcement. Includes the legal authority governing fire prevention, applications of the firecode, and management's principles as applied to a bureau.

AFS 109 Fire Department Specifications   3 Credits
Prerequisites: None. Specifications for firefighting apparatus, equipment, protective clothing, facilities and other sources of materials necessary to a fire department. The student will have a better understanding of NFPA Standards 1500 and 1901.

AFS 201 Fire Protection Systems   3 Credits
Prerequisites: None. Provides a general introduction into fire alarm monitoring devices and extinguishing systems. A strong base for application to either fire protection or a commercial application can be developed. Technical areas to be covered will be: fire extinguishing agents, portable fire extinguishers, carbon dioxide systems, dry chemical systems, halogenated systems/foam systems, explosive suppression systems, thermal/smoke/flame detection systems, and building monitoring systems. Standpipe and sprinkler systems will be covered in detail.

AFS 202 Fire Service Management   3 Credits
Prerequisites: None. Principles and functions of administrative and management personnel in the fire service. Topics discussed include: departmental organization, administrative & management procedures, personnel selection, line and staff functions, communications,

the fire company unit, public relations, and current problems in administration.

AFS 204 Fire Service Hydraulics   3 Credits
Prerequisites: None. A study of compressible fluids including: fluid properties, principles of fluid statics, flow system principles, pipe friction and head loss, flow measurements, pumps, and other appliances and hydraulic devices. Applications are related to fire protection systems, water supply systems and foam systems.

AFS 205 Aircraft Firefighting   3 Credits
Prerequisites: AGR 110, AGR 111, AGR 112, AGR 113, AGR 114, AGR 210. Examines the hazards associated with aircraft firefighting. Emphasis will be placed on lecture and practical use of airport firefighting equipment, extinguishing agents, strategy and tactics, rescue methods, and aircraft design and construction.

AGR 110 Introductory Agricultural Business and Economics   3 Credits
Prerequisites: Demonstrated competency through appropriate assessment or earning a grade of "C" or better in ENG 025, ENG 032 and MAT 050. Examines the role and characteristics of farm and off-farm agricultural business in our economy; introductory economic and business principles involved in successful organization, operation, and management.

AGR 111 Crop Production   3 Credits
Prerequisites: Demonstrated competency through appropriate assessment or earning a grade of "C" or better in ENG 025, ENG 032 and MAT 050. Introduces and examines fundamental principles of crop production and distribution. Emphasis is placed on applying technological advances in agronomy to active crop-production situations, including basic soils, agricultural meteorology, and crop physiology and breeding.

AGR 112 Fundamentals of Horticulture   3 Credits
Prerequisites: Demonstrated competency through appropriate assessment or earning a grade of "C" or better in ENG 025, ENG 032 and MAT 050. Examines the biology and technology involved in the production, storage, processing, and marketing of horticultural plants and products. Laboratories include experiments demonstrating both the theoretical and practical aspects of horticultural plant growth and development.

AGR 113 Animal Agriculture   3 Credits
Prerequisites: Demonstrated competency through appropriate assessment or earning a grade of "C" or better in ENG 025, ENG 032 and MAT 050. Examines the importance of livestock in the field of agriculture and the place of meats and other animal products in the human diet.

AGR 114 Introduction to Agricultural Systems   3 Credits
Prerequisites: Demonstrated competency through appropriate assess-

ment or earning a grade of "C" or better in ENG 025, ENG 032 and MAT 050. Provides the basic principles of selection and operation of agricultural production equipment, including farm tractors and machines and crop processing equipment. Includes planning consideration for crop storage and animal production systems and devices for water conservation and erosion control.

AGR 122 Crop Machinery and Equipment   3 Credits
Prerequisite: AGR 111. Principles of choosing, operating, and maintaining machines and equipment used in production of field crops. Emphasizes basics of electrical and hydraulic machines and common operating techniques and practices. Includes use of computer software and hardware and GIS to manage planting, tilling, and fertilizer and pesticide applications. Special focus on operator safety and environmental quality maintenance.

AGR 115 Animal Production Facilities   3 credits
Prerequisite: AGR 113. Principles of choosing, operating, and maintaining machines and equipment used in farm animal production. Emphasizes basics of electrical and hydraulic machines and common operating techniques and practices. Includes use of computer software and hardware to manage feed, health maintenance, and waste management. Special focus on operator and animal safety and environmental quality maintenance.

AGR 116 Swine Production   3 credits
Prerequisite: AGR 113. The principles, skills, and practices of handling swine and managing commercial swine production and production of pork products. Includes breeding, selection, feeding, and health of swine. Provides concepts of animal and animal-human interactions and animal behavior and practices to ensure animal and human well-being.

AGR 117 Soils and Fertilizers   3 credits
Prerequisite: AGR 111. Classification and characterization of soils and differences between soils, including physical, chemical, and biological properties. Relation of soils to land use and tillage, erosion, drainage, moisture supply and aeration practices. Relationship of soil properties to plant nutrition and to fertilizer chemistry, use, and management.

AGR 118 Diseases and Weed Control   3 credits
Prerequisite: AGR 111. Symptoms, identification, and control of diseases afflicting field crops. Biological fundamentals of common diseases and pests and reactions of pesticides and growth regulators with soils. Scientific, economic, and environmental fundamentals of the best practices of disease, weed, and insect management.

AGR 205 Animal Nutrition and Livestock Disease   3 credits
Prerequisite: AGR 113. Basic principles of managing animal diets to maximize health and minimize or prevent disease in animals and

humans. Includes nutrient classes and functions, digestive processes, symptoms of nutrient deficiency, characterization of feed products, diet formulation and management. Familiarizes students with disease processes and mechanisms and recognition and management of insects of animals.

AGR 206 Animal Anatomy and Physiology/Genetics 3 credits
Prerequisite: AGR 113. Principles of organ and tissue structure, operation, function, regulation, and integration of domestic farm animals. Examines mechanisms and processes of growth and development, reproduction, and lactation, and effects of environmental conditions. Includes basic genetic principles and theory, and their applications to physiological development and reproduction.

AGR 207 Marketing Agricultural Products 3 credits
Prerequisite: AGR 110. Includes principles of demand, supply, and price determination in agricultural markets. Effects of costs and margins, market structure, marketing channels and systems, horizontal and vertical integration, government regulations, marketing orders and quotas, and cooperatives on farm marketing decisions. Introduction to futures and options, their relationships to cash markets, and risk management strategies.

AGR 208 Farm Financial Records 3 credits
Prerequisite: AGR 110. Application of principles of financial and cost accounting, finance, and management to recording the farm's input, cost, production, price, and revenue information. Use and organization of financial data to assist farm management and decision-making, such as financial analysis, budgeting, strategic decisions for evaluating and improving operations, credit needs, and tax liabilities.

AGR 210 Management Methods for Agricultural Business 3 Credits
Prerequisites: Demonstrated competency through appropriate assessment or earning a grade of "C" or better in ENG 025, ENG 032 and MAT 050. Examines the management of nonfarm, agriculturally related businesses. Topics include tools for management decision making, legal forms of business organization, basics of accounting, and important financial management techniques. Case studies and computer simulation game.

AGR 211 Agricultural Data Management 3 credits
Prerequisite: AGR 208. Principles of collecting, managing, and retrieving financial, physical, and spatial data from farm operations to support the farm's decision-making and reporting. Emphasizes use of financial, statistical, and logical spreadsheet functions, GIS systems, record-keeping for fertilizer and pesticide usage and regulation, and specialized software applications, including integration of information from various sources and packages.

AGR 212 Environmental Systems Management 3 credits
Prerequisite: AGR 114. Principles of using, storing, controlling and disposing of agricultural waste, chemicals, and other hazardous materials, and using and maintaining application equipment, to maintain human and animal health and environmental quality. Includes basis for, and knowledge of state and federal regulatory requirements. May include instruction for certification in hazardous materials management or private pesticide applicator licensing.

AMS 101 Steering and Suspension 3 Credits
Prerequisites: None. A study of steering and suspension systems commonly used on modern vehicles. Students will study steering and suspension components, power steering units, principles of four-wheel alignment, tire repair and wheel balancing. The course will emphasize professional methods of diagnosis and repair for related components.

AMS 102 Two and Four Wheel Alignment 3 Credits
Prerequisites: None. Covers the principles of two- and four-wheel alignment and wheel balance. Emphasizes practical work experience in the lab covering all the alignment angles.

AMS 103 Principles of Alternative/ Renewable Engines 3 Credits
Prerequisites: None. Covers basic principles and history of alternative energy sources. Industry and government status of geothermal, wind, solar, biomass, fuel cells and other energy sources will be highlighted. Alternative and traditional energies will be defined and compared in terms of today's use. The evolving energy career areas will be discussed.

AMS 104 Liquid Propane Gas (LPG) 3 Credits
Prerequisites: AMS 107. First in a series of two that focuses on the use of liquefied propane gas as an alternative fuel, and how it's used in material handling, automobiles and light duty trucks. Additionally, the theory of operation, installation, diagnosis and current safety regulations of the use of LPG will be covered in this class.

AMS 105 Powertrain Service 3 Credits
Prerequisites: None. A study of driveline theory and in-car service procedures. Theory and overhaul procedures related to the driveshaft and axle assemblies for front and rear wheel drive vehicles are included as well. Removal and installation of manual and automatic drivetrains will be covered.

AMS 106 Compressed Natural Gas I 3 Credits
Prerequisites: AMS 107. Introduces students to the role, function and application of compressed natural gas (CNG) as an alternative fuel for today's internal combustion engine. Course prepares students to take the ASE F1 exam.

AMS 107 Engine Principles and Design 3 credits
Prerequisites: None. An introduction to engine dynamics, theory of engine operation and characteristics of engine design. Studies R & R, visual inspection, precision measuring, gaskets, lubricants, sealants, coolants of modern engines and engine service.

AMS 108 Biomass, Biogas, Micro-turbine Technology 3 credits
Prerequisites: Demonstrated competency through appropriate assessment or earning a grade of "C" or better in ENG 025 and ENG 032. Focuses on the release of chemical energy by accelerating the naturally occurring carbon dioxide cycle and the use of this energy to power engines and generators. Natural fuels, fuels made from plant materials and garbage will be discussed. Engine efficiency and its impact on lower emissions will be discussed.

AMS 109 Engine Performance I 3 credits
Prerequisites: None. The first in a series of three courses that introduces the operating systems of an internal combustion engine. The basic theory and operation of ignition, fuel, emission, and mechanical systems will be presented. Basic test procedures will be introduced. Computer engine control basics will be explained. Basic service and replacement procedures and techniques will also be covered.

AMS 110 Hybrid Systems 3 credits
Prerequisites: AMS 106. Teaches students the fundamentals of troubleshooting, diagnosing and repairing gas-electric hybrid vehicles. The student will become a multi-skilled technician in preventive maintenance, refueling procedures, and problem solving on a wide range of skills to service a hybrid vehicle.

AMS 111 Alternative Fuels Installation and Application 3 Credits
Prerequisites: AMS 103, AMS 104, and AMS 106. Focuses on shop safety, gaseous fuel handling, federal fuel standards and industry standards related to the conversion and installation processes of alternative fuel system components/systems to current vehicles.

AMS 112 Liquid Propane Gas II (LPG) 3 Credits
Prerequisites: AMS 104. Second course in the series covering liquid propane gas. LPG II continues with in-depth topics in maintenance, diagnosis and repair as well as conversions and installation using the liquid propane system.

AMS 113 Electrical and Electronics I 3 Credits
Prerequisites: None. The first of three electrical classes that introduce the fundamentals of electricity and automotive electronics. Extensive use of digital multimeters and circuit troubleshooting is covered. Emphasis is placed on understanding and utilizing electrical diagrams. Starting and charging systems are presented

AMS 114 Compressed Natural Gas II   **3 Credits**
Prerequisites: AMS 106. Applies skills gained from AMS 106 and expands them in theory and application. The course focuses on the advanced maintenance, diagnosis and repair, as well as conversion and installation of the compressed natural gas fuel system.

AMS 121 Braking Systems   **3 Credits**
Prerequisites: None. Theory, service and repair of automotive braking systems and their components. Emphasis is given to hydraulic theory, repair, and service of system components, including anti-lock and traction control systems.

AMS 123 Electrical and Electronics II   **3 Credits**
Prerequisites: AMS 113 and demonstrated competency through appropriate assessment or earning a grade of "C" or better in MAT 040. The second in a series of three courses that will study advanced electrical circuit theory and diagnostic procedures. The topics for this course include; function, construction, principles of operation, and troubleshooting techniques for the various automotive electrical and electronic systems. Diagnosis and repair of system circuits and components using proper diagnostic techniques will be emphasized.

AMS 125 Manual Drivetrains   **3 Credits**
Prerequisites: None. Theory, diagnosis, and overhaul procedures related to manual transmission/transaxles, clutches, transfer cases, and differential assemblies.

AMS 127 Engine Repair   **3 Credits**
Prerequisites: None. Use of precision tools, equipment, and procedures needed to repair today's modern engine. Repair, proper assembly, and installation techniques applicable to the modern engine are included.

AMS 135 Automatic Transmission   **3 Credits**
Prerequisites: None. A study of automatic transmission theory of operation, diagnosis, testing, and repair procedures. Theory and diagnosis of computer-controlled transmissions will also be covered.

AMS 149 Introduction to Motor Sports   **3 Credits**
Prerequisites: None. Provides an overview of the various racing/motor sports venues in the U.S. Students will gain an understanding of various racing venues and their operations. Emphasis will be placed on professional level racing, although sportsman and semi-professional venues will also be discussed. Students will learn about the various careers available throughout the motor sports industry.

AMS 152 Diesel Engine Theory   **3 Credits**
Prerequisites: None. Operation of the diesel engine and the differences between a diesel and gas engine. Also includes instruction on shop equipment, fuels, oils, seals, bearings, lubrication and cooling system.

AMS 201 Climate Control Systems   **3 Credits**
Prerequisites: AMS 113. Covers air conditioning and heating systems used on modern vehicles. Emphasis is given to the operation and theory of the air conditioning and its components. Vacuum and electronic control circuits are included. Federal regulations for handling and recycling of all refrigerants will be stressed.

AMS 209 Engine Performance II   **3 Credits**
Prerequisites: AMS 109. Covers the diagnosis and repair of ignition, fuel, emission, and computer systems. Extensive coverage is given to manufacturer specific computer engine control and fuel injection systems. Topics will include OBD I, OBD II, and future on-board diagnostic systems.

AMS 219 Engine Performance III   **3 Credits**
Prerequisites: AMS 209. Covers advanced concepts in the diagnosis and repair of ignition, fuel, emission, and computer systems. Advanced coverage of manufacturer specific computer engine control and fuel injection systems will be stressed. Federal and state emission requirements will be covered with a focus on 5-gas exhaust analysis. Alternative fuel technology will also be covered.

AMS 229 Driveability Diagnosis   **3 Credits**
Prerequisites: AMS 219. Designed to develop a student's ability to diagnose and repair complex driveability concerns. Emphasis will be placed on learning and following systematic diagnostic procedures. Students will utilize the advanced capabilities of diagnostic equipment provided.

AMS 243 Advanced Electronics   **3 Credits**
Prerequisites: Program Advisor Approval. Presents advanced theory and diagnosis of automotive electronic systems. It examines all major vehicle computer systems with an emphasis on the diagnosis, testing, and repair of these systems and advanced circuits. This course uses lab scopes, scan tools, and graphing multimeters. This is the capstone course for automotive technology.

AMS 250 Motor Sports Fabrication I   **3 Credits**
Prerequisites: None. Introduces the fundamentals of motor sports fabrication and the required tools and equipment. Students will learn to cut, weld and form metal for use in race car fabrication. Sheet metals brakes, bead rollers, tube benders, tubing notchers and a variety of welding process will be covered. Students will demonstrate knowledge through project/task completion.

AMS 251 Motor Sports Fabrication II   **3 Credits**
Prerequisites: AMS 250, WLD 207, and WLD 208. Builds on the fundamentals learned in AMS 250 Motors Sports Fabrication I. Students will learn the basic machining process using mills, metal lathes and CNC processes. English wheels, planishing hammers, sheet metals brakes,

bead rollers, tube benders, tubing notchers and a variety of welding process will be utilized. Students will demonstrate knowledge through project/task completion.

AMS 253 Service Organization and Parts   **3 Credits**
Prerequisites: None. Facility and personnel requirements for efficiently run parts and service departments. Emphasis on principles, practices and procedures necessary to effectively operate the departments. Includes manufacturer catalogs and component numbering systems, methods of scheduling time and techniques for obtaining maximum work efficiency from technicians and specialists.

AMS 254 High Performance Engines/Systems I   **3 Credits**
Prerequisites: None. Covers the fundamentals, construction, components and design of high performance engines/systems for various racing venues. The course will also cover related systems; cooling, lubrication, suspension and braking. Students will study the theory, design and requirements of high performance engines/systems and then design there own modified engine which they will run and evaluate using the computer dyno simulation program. Emphasis in this course is placed on bolt on performance modifications/power adders.

AMS 255 High Performance Engines/Systems II   **3 Credits**
Prerequisites: AMS 254. Covers the assembly/blueprinting of a competition engine. The course will focus on the basics of block and component preparation and clearancing, cylinder head porting, intake port matching and component balancing. Students will measure all critical clearances during assembly including but not limited to: deck heights, piston to valve clearances, chamber volumes, bearing clearances, piston to wall clearances, rod side clearances.

AMS 257 Composite Fabrication I   **3 Credits**
Prerequisites: AMS 250. Introduces the fundamentals of motor sports fabrication utilizing composite materials and the required tools and equipment. Students will learn to cut, lay up, form and cure materials for use in race car fabrication. Emphasis will be placed on Carbon Fiber and Fiberglass fibers with epoxy and polyester resin materials. Students will demonstrate knowledge through project/task completion.

AMS 258 Motor Sports Kit Car Building   **3 Credits**
Prerequisites: None. Covers the design and building of the cobra kit car. Emphasis will be placed on proper assembly/fabrication/improvement of the various subassemblies required to build this vehicle. Tire and wheel combinations, exhaust systems and other accessory options will also be discussed. Students will learn to cut, weld and form metal as needed for use in the kit car assembly. Students will demonstrate knowledge through project/task completion.

AMS 261 Dynamometer Testing and Analysis   3 Credits
Prerequisites: Program Advisor Approval. Covers chassis dynamometer operation and analysis of the software generated data. Students should have a background in high performance vehicles. The affects of modifications to vehicles will be stressed.

**AMS 263 Blueprint and CAD Basics for
Motor Sports   3 Credits**
Prerequisites: None. Introduces basic blueprint reading skills commonly used in the racing parts fabrication and customization. Areas of study include: Interpretation of drawings dimensioned and noted to ANSI standards for machining, welding, and fabrication applications, inspection techniques, and CAD (Computer Assisted Design) fundamentals using AutoCAD© to create shop floor drawings. This course also introduces reverse engineering, automated inspection, and rapid prototyping techniques.

AMS 271 Cooperative – Drivelines   3 Credits
Prerequisites: Program Advisor Approval. Provides qualifying students an opportunity to work at a job site and complete the requirements for driveline service. Provides on-the-job experience while earning credit toward an Associate's degree.

AMS 272 Cooperative – Suspension   3 Credits
Prerequisites: Program Advisor Approval. Provides qualifying students an opportunity to work at a job site and complete the requirements for chassis and suspension service. Provides on-the-job experience while earning credit toward an Associate's degree.

AMS 273 Cooperative – Brakes   3 Credits
Prerequisites: Program Advisor Approval. Provides qualifying students an opportunity to work at a job site and complete the requirements for braking systems. Provides on-the-job experience while earning credit toward an Associate degree.

AMS 274 Cooperative – Electrical   3 Credits
Prerequisites: Program Advisor Approval. Provides qualifying students an opportunity to work at a job site and complete the requirements for electrical systems service. Provides on-the-job experience while earning credit toward an associate degree.

AMS 275 Cooperative - Engine Repair   3 Credits
Prerequisites: Program Advisor Approval. Provides qualifying students an opportunity to work at a job site and complete the requirements for engine repair. Provides on-the-job experience while earning credit toward an Associate degree.

AMS 276 Cooperative –Engine Performance   3 Credits
Prerequisites: Program Advisor Approval. Provides qualifying students an opportunity to work at a job site and complete the requirements for engine performance. Provides on-the-job experience while earning credit toward an associate degree.

AMS 279 Service Shop Operations   3 Credits
Prerequisites: Program Advisor Approval. Introduces students to the "Real World" atmosphere of the automotive workplace. Additionally, the course presents historical and future trends with emphasis in career/placement requirements. Safety, OSHA, EPA, and environmental standards are presented. Introduction to the eight areas of ASE Technician Certification and related tools are presented. Students will rotate the roles of Service Manager, Service Writer, Parts Manager, and Team Leader. Each student will also experience the following technician roles: general technician, alignment technician, brake technician, and diagnostic technician. Students will work on customer vehicles and gain a more clear understanding of what the expectations are for today's Automotive Service Technician.

AMS 280 Co-Op or Internship   1 Credit
Prerequisites: Program Advisor Approval. Provides qualifying students an opportunity to work at a job site that is specifically related to their career objective. This class will provide on-the-job experience while earning credit toward an associate degree.

AMS 299 ASE Certification Review   3 Credits
Prerequisites: None. Prepares the professional automotive technician to attempt the National Institute for Automotive Service Excellence certification tests. All eight areas of testing will be reviewed and sample certification tests given. Lectures will stress theory of operation and diagnostic logic.

ANH 154 Cultural Anthropology   3 Credits
Prerequisites: Demonstrated competency through appropriate assessment or earning a grade of "C" or better in ENG 025, ENG 032, and MAT 044. The scientific study of human culture. Variations in patterns of human behavior are holistically examined in their relationship to such factors as biological evolution, socialization, kinship, economy, religion, education, personality, art, music, dance, and cultural change.

ANH 254 Introduction to Archaeology   3 Credits
Prerequisites: Demonstrated competency through appropriate assessment or earning a grade of "C" or better in ENG 025, ENG 032, and MAT 044. The scientific study of the material artifacts of human cultural remains. Provides insight into the earliest patterns of human behavior and its subsequent evolution into more complex forms. Acquaints the student with archaeological methods and with major findings of the archaeological record from selected culture areas.

**ANP 067 Introduction to Anatomy
and Physiology   3 Credits**
Prerequisites: Demonstrated competency through appropriate assessment or earning a grade of "C" or better in ENG 031 and MAT 044. Introduces basic concepts and terminology used in Anatomy and Physiology. Prepares entering students who took no high school life

science or took it several years ago for ANP 101 and ANP 102 (or ANP 203 and 204). Provides a general introduction to chemistry, cells, tissues, body systems, and basic physiological processes.

ANP 101 Anatomy and Physiology I   3 Credits
Prerequisites: Demonstrated competency through appropriate assessment or earning a grade of "C" or better in ENG 025, ENG 032, and MAT 044. Develops a comprehensive understanding of the close inter-relationship between anatomy and physiology as seen in the human organism. Introduces students to the cell, which is the basic structural and functional unit of all organisms, and covers tissues, integument, skeleton, muscular and nervous systems as an integrated unit. Includes lab.

ANP 102 Anatomy and Physiology II   3 Credits
Prerequisites: ANP 101 and demonstrated competency through appropriate assessment or earning a grade of "C" or better in MAT 050. Continues the study of the inter-relationships of the systems of the human body. Introduces students to the study of the endocrine, cardiovascular, lymphatic, respiratory, digestive, urinary and reproductive systems. Includes lab.

ANP 201 Advanced Human Physiology   4 Credits
Prerequisites: Successful completion of ANP 101 and ANP 102, or equivalent. Provides a study of human physiology for students entering health-oriented fields. Emphasizes the study of the function of cells, the nervous, muscular, circulatory, respiratory, urinary, digestive and endocrine systems, and their homeostatic mechanisms and system interaction. Focuses laboratory exercises on clinically relevant measurement of human function. Includes lab.

ANP 203 Human Anatomy and Physiology I   5 Credits
Prerequisites: Demonstrated competency through appropriate assessment or earning a grade of "C" or better in ENG 025, ENG 032 and MAT 044. Provides a comprehensive study of the interrelationship between anatomy and physiology from chemical to cellular to organ interactions. Provides an in-depth study of each system of the body from a viewpoint of structure as well as function. Includes lab.

ANP 204 Human Anatomy and Physiology II   5 Credits
Prerequisites: ANP 203 and demonstrated competency through appropriate assessment or earning a grade of "C" or better in MAT 050. Provides the remaining comprehensive study of the inter-relationship between anatomy and physiology from chemical to cellular to organ interactions. Provides an in-depth study of each system of the body from a viewpoint of structure as well as function: endocrine, cardiovascular, lymphatic, respiratory, digestive, urinary, and reproductive systems. Includes lab.

ARH 101 Survey of Art and Culture I TransferIN 3 Credits
Prerequisites: Demonstrated competency through appropriate assess-

ment or earning a grade of "C" or better in ENG 025 and ENG 032. Surveys painting, sculpture, and architectural styles from ancient cultures to the proto-Renaissance era. Emphasizes the historical context of art movements as well as analysis of the work of individual artists.

ARH 102 Survey of Art and
Culture II   TransferIN 3 Credits
Prerequisites: Demonstrated competency through appropriate assessment or earning a grade of "C" or better in ENG 025 and ENG 032. Surveys painting, sculpture, and architectural styles from the Renaissance to the present. Emphasizes the historical context of art movements as well as analysis of the work of individual artists.

ARH 110 Art Appreciation 3   TransferIN 3 Credits
Prerequisites: Demonstrated competency through appropriate assessment or earning a grade of "C" or better in ENG 025 and ENG 032. An introductory course in art which explores the creative processes of humankind, its usage of specific traditional and contemporary media for communication and the study of periods and styles in art as they relate to the human condition. The course will explore the nature of art, the evaluation of art, and the processes and materials of art. The students will examine the formal elements of design and look at a wide variety of both two and three-dimensional artworks and will learn about the processes and tools involved in their creation.

ART 100 Life and Object Drawing I   3 Credits
Prerequisites: Demonstrated competency through appropriate assessment or earning a grade of "C" or better in ENG 025 and ENG 032. This introductory course will result in the advancement of basic drawing skills utilizing the human figure, natural and manufactured objects. Basic techniques and creative processes will be explored through expressive use and exploration of a variety of materials and techniques. Emphasis will be placed on developing basic quality draftsmanship with a focus on proportion and structure, specifically by drawing only from life sources.

ART 101 Life and Object Drawing II   3 Credits
Prerequisites: ART 120. Rendering abilities will continue to advance with drawing techniques utilizing the human figure, natural and manufactured objects, specifically from life (not photographs). More advanced techniques and creative processes will be explored through expressive use and exploration of a variety of materials and techniques. Emphasis will be placed on developing a higher level of quality draftsmanship with a focus on proportion and structure.

ART 102 Color and Design Theory   3 Credits
Prerequisites: Demonstrated competency through appropriate assessment or earning a grade of "C" or better in ENG 025 and ENG 032. A critical thinking course that delves into the thought processes and manual skills needed in design and its application in the realm of two-dimensional fi ne arts. Intermediate to advanced design and

color theory will be addressed through the manipulation of imagery in two-dimensional media. Critical thinking, problem-solving and manual techniques will be emphasized equally.

ART 103 Three-Dimensional Design   3 Credits
Prerequisites: Demonstrated competency through appropriate assessment or earning a grade of "C" or better in ENG 025 and ENG 032. An introductory course into the thought processes and manual skills needed in three-dimensional design. Basic techniques and creative processes will be explored through expressive use and exploration of a variety of materials and techniques. Critical thinking, problem-solving and manual techniques will be emphasized equally.

ART 104 Contemporary Art History   3 Credits
Prerequisites: Demonstrated competency through appropriate assessment or earning a grade of "C" or better in ENG 025 and ENG 032. This course chronologically surveys painting, sculpture, architectural styles and the minor arts for contemporary art. Emphasis is on the historical context of art movements as well as analysis of the work of individual artists. This course will provide the basic knowledge of art with grounding in technique and vocabulary along with dealing with current issues, multicultural dimensions of art and making a connection between art history and art making. Contemporary art has a vocabulary all of its own and this course provides the introductory tools to appreciate all art forms over the last three decades. Major movements will be introduced with characteristic works including performance, painting, sculpture, printmaking, environmental, photography and computer graphics.

ART 105 Foundation I   3 Credits
Prerequisites: Demonstrated competency through appropriate assessment or earning a grade of "C" or better in ENG 025 and ENG 032. This course introduces students to the fundamentals of art and design through a survey of multiple art processes and techniques. Exposing students to broad subject matter and using four or five material specific exercises to emphasize additive and subtractive processes.

ART 106 Foundation II   3 Credits
Prerequisites: ART 130. Continues to expose students to broad subject matter by utilizing four or five material specific exercises to emphasize additive and subtractive processes at an advanced level. Students will also be exposed to the variety of artistic possibility through multiple art processes and techniques by working with the instructor and visiting artists.

ART 200 Intermediate Drawing I   3 Credits
Prerequisites: ART 100. This intermediate course will continue the advancement of drawing skills utilizing the human figure, natural and manufactured objects. There will be a thorough investigation of nature and the human figure through drawing. Techniques and creative processes will be explored through expressive use and explo-

ration of a variety of materials and techniques. Emphasis will be placed on quality draftsmanship with a focus on structure, line, gesture, and movement.

ART 201 Intermediate Drawing II   3 Credits
Prerequisites: ART 200. This intermediate course will continue the advancement of drawing skills utilizing the human figure, natural and manufactured objects. There will be a thorough investigation of nature and the human figure through drawing. Techniques and creative processes will be explored through expressive use and exploration of a variety of materials and techniques. Emphasis will be placed on quality draftsmanship with a focus on structure, line, gesture, and movement.

ART 204 Women in Art   3 Credits
Prerequisites: ARH 101 or ARH 102 or ART 104. This course will survey painting, sculpture, and architecturally styles created by women from medieval cultures to the present. Contemporary approaches to women's art will also be explored and emphasized.

ART 211 Sculpture I   3 Credits
Prerequisites: ART 103. This is a basic course in the consideration of three-dimensional form in sculptural concept. Students will be exposed to various related materials, techniques, and processes. Emphasis will be on composition, positive and negative space and craft of material technique.

ART 212 Sculpture II   3 Credits
Prerequisites: ART 211. This is a continuation of Sculpture I resulting in intermediate use of three-dimensional design skills, applications and materials. Emphasis will be on intermediate techniques and advancing compositional skill.

ART 223 Printmaking I: Intaglio   3 Credits
Prerequisites: ART 100. Beginning course in printmaking, which introduces students to a variety of traditional techniques. Students are instructed in basic printing processes and in use of the presses. Emphasis will be on composition, craft, technical processes and translation of line to print.

ART 224 Printmaking II: Serigraphy   3 credits
Prerequisites: ART 121. Beginning course in printmaking, which introduces students to the traditional techniques of serigraphy or silkscreen printmaking. Students are instructed in basic printing processes and in use of the screens. Emphasis will be on composition, craft, technical processes and translation of multiple types of content to print.

ART 225 Printmaking III: Relief and Monotype 3 credits
Prerequisites: ART 121. Beginning course in printmaking, which introduces students to the traditional techniques of relief, collagraph and monotype. Students are instructed in basic printing processes and in

use of the presses. Emphasis will be on composition, craft, technical processes and translation of multiple types of content to print.

ART 226 The Art of The Book — 3 credits
Prerequisites: ART 102. Introduces the techniques, processes and aesthetic concerns of book arts as a studio art medium. Students will complete a number of original works using folding, cutting, and traditional fabrication as well as adhesive and non-adhesive books with sewn spines. Technique, concept and aesthetics will be discussed and used as a foundation for composition, execution and formal analysis in critiques.

ART 227 Papermaking — 3 credits
Prerequisites: ART 102. Introduces the techniques, processes and aesthetic concerns of papermaking as a studio art medium. Students will complete a number of original works using handmade pulp as well as paper sheets, forms, paintings and other techniques. Technique, concept and aesthetics will be discussed and used as a foundation for composition, execution and formal analysis in critiques.

ART 231 Painting I — 3 Credits
Prerequisites: VIS 111. An introductory course aimed at the development of painting skills, techniques, and aesthetic sensibilities. Explores and experiments with basic painting mediums, which may include: Watercolors, Acrylics, and Oils in varying degrees. Builds visual thinking skills and methods for channeling creative energies that enable a lifetime of personal artistic expression.

ART 232 Painting II — 3 Credits
Prerequisites: ART 231. An extension of the skills and concepts introduced in Painting I. Emphasis is on individual experimentation and the development of more advanced critical and technical skills in the discipline. Course continues to build visual thinking skills and methods for channeling creative energies that further enable a lifetime of personal artistic expression.

ART 250 Senior Seminar — 3 Credits
Prerequisites: Permission of Program Chair. Final course of program before graduation that prepares the student for transfer to another University environment and to begin exhibiting and working professionally. Course covers artist resume development, artist statement, artwork presentation: digital and in-hand, along with some of the business aspects of being an artist. A polished presentation with portfolio is the final for this course.

ASY 101 Solar System Astronomy — TransferIN 3 Credits
Prerequisites: Demonstrated competency through appropriate assessment or earning a grade of "C" or better in ENG 025, ENG 032, and MAT 044. Survey of the history of astronomy, astronomical cycles and phenomena, astronomical instruments, formation and evolution of the planets and their satellites, comparative planetology, asteroids,

comets, meteors, the sun, origin of the solar system and its place in the galaxy and the universe.

AVT 141 Aviation Basics I — 3 Credits
Prerequisites: None. Provides familiarization with aviation drawings and blueprint reading. The student learns the proper methods to weigh various aircraft and the requirements for weight-and-balance reporting. Fabrication of fluid lines for hydraulic, oxygen, and fuel systems is also covered.

AVT 142 Aviation Basics II — 3 Credits
Prerequisites: None. A math and physics review course with practical applications for aviation. The student reviews basic mathematical operations, determines areas of wing plan forms, and volumes of fuel tanks. Ratios and proportions are discussed as they apply to wings and aircraft engines. The operation of simple machines, aircraft nomenclature, and basic aerodynamics are also covered.

AVT 144 Aircraft Electricity — 4 Credits
Prerequisites: None. Introduces the student to the principles of basic electricity. The student learns Ohm's Law and the relationships of voltage, current, resistance, and power in DC electrical circuits. The relationships between RMS values of voltage and current, true and apparent power, reactance, and impedance using vector algebra in AC circuits are discussed. Electrical wiring in the aircraft, proper test equipment, basic troubleshooting, and battery servicing are also covered.

AVT 145 Aircraft Ground Servicing — 2 Credits
Prerequisites: None. Focuses on the proper methods and safety procedures involved in working with aircraft on the ground. The student learns identification of aircraft fuels and refueling procedures and how to properly clean, inspect, and treat corrosion. Standard hand signals used with marshalling aircraft, engine run-up and taxiing procedures and ramp safety are also included.

AVT 146 Aviation Regulations — 2 Credits
Prerequisites: None. Introduces the student to the Federal Aviation Regulations (FARs) pertaining to aircraft maintenance (FAR Parts 23, 43, and 65), the Advisory Circulars (ACs) that expand upon these regulations, and proper record keeping for maintenance tasks performed on civil aircraft. Included are the format of technical publications and the various media (paper, microfiche, and CDROM) on which they are published.

AVT 148 Aviation Materials and Processes — 3 Credits
Prerequisites: None. Provides an overview of aviation manufacturing and inspection methods. The student is introduced to processes and special tools used in aviation quality assurance.

AVT 222 Non Metallic Structures — 2 Credits
Prerequisites: None. Introduces the student to inspecting and evaluation honeycomb and laminated structural damage as well as dam-

aged transparent acrylic materials structures. The student becomes familiar with the methods involved in removing and repairing damaged honeycomb and laminated structural materials and repairing acrylic materials.

AVT 223 Aircraft Finishes — 3 Credits
Prerequisites: None. Familiarizes the student with the process of selecting, applying, and repairing fabric coverings; identifying wood defects and making repairs to wood structures. Also covered are the application of finishing materials and identification of finish defects.

AVT 224 Aircraft Inspection — 4 Credits
Prerequisites: None. Presents the operation of aircraft hydraulic systems that include: landing gear struts, aircraft brakes, steering, and flaps. Students also study aircraft jacking and leveling, aircraft wheels, tires, and tubes. Aircraft conformity and airworthiness inspections are also covered.

AVT 225 Airframe Fluid Systems — 4 Credits
Prerequisites: None. Covers the proper handling and identification of hydraulic fluids; inspection of hydraulic lines and fittings; and servicing, troubleshooting, and repairing hydraulic systems and components. Additionally, students learn about the function and operation of aircraft pressurization and cabin air distribution systems, and aircraft fuel systems. Introduces the proper methods involved in inspecting and servicing oxygen systems.

AVT 226 Airframe Electrical Systems — 4 Credits
Prerequisites: None. Presents the theory of operation and proper methods of inspecting, servicing, troubleshooting, and repairing the various electrically powered aircraft systems. Included are power distribution systems for light and transport aircraft, power generation and regulation. Proper wiring techniques and connector repair. Speed and configuration warning systems areas are also covered.

AVT 227 Aircraft Sheetmetal — 6 Credits
Prerequisites: None. Introduces the basic techniques necessary to perform sheet metal repairs on aircraft structures. Students develop skills in these areas: using sheet metal tools, laying out parts, forming parts with bending machines, and repairing various structural airframe components.

AVT 228 Aircraft Instruments and Avionics — 3 Credits
Prerequisites: None. Covers the inspection, troubleshooting, and servicing of avionics and aircraft instruments installed in both general aviation and transport category aircraft. Included are basic theory of operation and the regulations pertaining to maintenance of instruments and avionics.

AVT 231 Reciprocating Powerplants — 5 Credits
Prerequisites: None. Covers overhaul, inspection, and removal of reciprocating engines. Students will perform a receiving inspection on an

aircraft engine and perform a complete overhaul to operational condition. Students will also learn inspection and repair procedures specific to radial engines.

AVT 232 Turbine Powerplants 5 Credits
Prerequisites: None. Covers the overhaul of a turbine engine; and the inspection, checking, servicing, repair, and removal/installation of turbine engines. Students will perform a receiving inspection on an aircraft engine and perform a complete overhaul.

AVT 233 Powerplant Fuel and Induction Systems 5 Credits
Prerequisites: None. Studies fuel metering systems in reciprocating powerplants. Airflow through turbines, superchargers and carburetors are discussed. Students overhaul carburetors to supplement theory discussions in this area. Engine cooling systems are also covered.

AVT 234 Reciprocating Engine Ignition and Fuel Systems 2 Credits
Prerequisites: None. The student overhauls magnetos. Also inspects and repairs ignition and fuel systems.

AVT 236 Turbine Starting Systems and Auxiliary Power 2 Credits
Prerequisites: None. Introduces reciprocating and turbine engine electrical systems. Students will inspect, service, troubleshoot, and repair turbine pneumatic starting systems and turbine ignitions.

AVT 237 Propellers 4 Credits
Prerequisites: None. Covers the inspection, repair, and troubleshooting of propeller control systems. The removal, installation, and balancing of propellers are also covered.

AVT 238 Turbine Systems and Components 4 Credits
Prerequisites: None. Introduces turbine-engine electrical systems. Students inspect, check, troubleshoot, and repair engine fire detection systems. Exhaust systems and thrust reversers are also covered.

AVT 240 Structural Repair 5 Credits
Prerequisites: None. Introduces the students to welding techniques used on aircraft. Rigging of flight controls on a fixed wing and rotary wing aircraft are accomplished. Repair, servicing, and inspection of ice/rain control, and smoke/carbon monoxide detection systems are also covered.

BCM 102 Construction Graphics and Print Reading 3 Credits
Prerequisites: Demonstrated competency through appropriate assessment or earning a grade of "C" or better in ENG 025, ENG 032 and MAT 044. An introduction to drawing skills and techniques necessary to produce basic construction drawings. Emphasis is placed on the interpretation of the requirements of contract drawings, understanding

terminology, symbols, and conventions used in residential, commercial, and industrial drawings, including architectural, structural, mechanical, electrical plans and sections.

BCM 104 Commercial and Industrial Construction 3 Credits
Prerequisites: BCM 102. An introduction to steel, concrete, and composite material buildings found in heavy construction projects. Students will study steel frame, concrete structures, Bent Surface Structures, Space Frames, and other construction types used in heavier commercial and industrial buildings.

BCM 105 Concrete and Soils 3 Credits
Prerequisites: Demonstrated competency through appropriate assessment or earning a grade of "C" or better in ENG 024, ENG 031 and MAT 044. An introductory study of the properties and uses of concrete in construction. Emphasis is placed on quality control in the field. Other topics include: design and methods of form work, placing, curing, and finishing. 25% of the course content will cover the properties and behavior of soils including compaction, permeability, compressibility, and shear strength. Course content is consistent with principles and standards as determined by the Portland Cement Association (PCA), the American Concrete Institute (ACI), the Construction Specifications Institute (CSI), and the American Society for Testing Materials (ASTM).

BCM 115 Construction Management Practices 3 Credits
Prerequisites: Demonstrated competency through appropriate assessment or earning a grade of "C" or better in ENG 025 and ENG 032. Students gain knowledge and understanding of the management functions in the construction industry including the project cycle, company and project organization, financial and budgeting considerations, documentation, monitoring, cost control, etc. Emphasis is placed on the responsibilities of managers and their relationship to other agents involved in a construction project.

BCM 206 Construction Estimating 3 Credits
Prerequisites: BCM 102 and demonstrated competency through appropriate assessment or earning a grade of "C" or better in MAT 050. The first in a series of two estimating courses. Students will study fundamentals of performing construction estimates including making material quantity take-offs and labor estimates. The Construction Specifications Institute (material divisions) will be used to organize the estimating process. Emphasis is placed on interpreting plans and specifications to determine accurate material quantities and labor estimates, selection of appropriate material grades and types, and other miscellaneous cost associated with successful completion of a building project.

BCM 210 Codes and Specifications 3 Credits
Prerequisites: Demonstrated competency through appropriate assessment or earning a grade of "C" or better in ENG 025 and ENG 032. A

study of the interpretation of technical building specifications, codes, and contract documents as they affect the selection, and application of materials and equipment. The course will emphasize understanding of local, state, and national codes, and explore contractual relationships and considerations.

BCM 220 Project Planning and Control 3 Credits
Prerequisites: Program Advisor Approval. Covers the concepts and techniques for scheduling and control systems for effectively managing a construction project. Students will obtain the skills and knowledge necessary to effectively plan and schedule a project, to monitor and control all project aspects, and to anticipate and resolve problems as they occur.

BCM 223 Advanced Estimating 3 Credits
Prerequisites: BCM 102 and BCM 206. The second of two estimating courses with emphasis on using specialized software to perform estimating and cost control tasks. Estimating projects are focused on commercial and industrial construction.

BCM 230 Construction Equipment 3 Credits
Prerequisites: Demonstrated competency through appropriate assessment or successful completion of MAT 111. Introduces principles and techniques for selecting and managing construction equipment. Identification and evaluation of types of site equipment including hand tools, power equipment, earthmoving/excavation equipment, etc. Emphasis is placed on estimating and analysis of equipment productivity, ownership and operating cost.

BCM 235 Safety and Risk Management 3 Credits
Prerequisites: Demonstrated competency through appropriate assessment or earning a grade of "C" or better in ENG 025 and ENG 032. Emphasis is placed on identifying and reducing safety risk on the job site. Students will study OSHA standards, accident and fire prevention, protection from hazardous materials, use of protective equipment and clothing, construction equipment and other safety concerns. The role of managers, workers, sub-contractors and others is stressed. Students will gain an appreciation for how accidents and safety concerns affect morale and productivity.

BCM 240 Professional Internship 3 Credits
Prerequisites: Program Advisor Approval. Major focus is to provide practical on-the-job experience working with a construction company. Student interns might work in the areas of print reading, estimating, equipment management, project supervision, or other management related activities and tasks.

BCT 104 Floor and Wall Layout and Construction 3 Credits
Prerequisites: None. Examines the design and construction of floor and wall systems. Student develops the skill needed for layout and con-

struction of floor and wall systems from blueprints and professional planning documents.

BCT 105 Roof Construction 3 Credits
Prerequisites: None. Studies the design and construction of roof systems. Emphasizes use of the framing square for traditional rafter and truss roofing. Instruct students in additional up-to-date techniques.

BCT 107 Electrical Blueprint Reading/NEC 3 Credits
Prerequisites: Program Chair Approval. An introduction to the skills in basic electrical print interpretation and understanding electrical symbols, presenting the student with the electrical design problems and related calculations in accordance with the most current NEC. Emphasis is placed on reading blueprints and specifications for a single-family dwelling, multi-family dwelling, commercial and industrial applications and hazardous locations. The student will be using a new computer assisted program to assist with estimating a project. Emphasis will be placed on understanding residential and commercial standards and the proper development of mechanical engineering drawings.

BCT 114 Exterior Trim 3 Credits
Prerequisites: CON 101. Develops necessary skills in the finishing of the exterior of a building. The student obtains skills in the installation of the cornice, windows, doors and various types of sidings used in today's market place.

BCT 115 Auxiliary Building Design and Construction 3 Credits
Prerequisites: CON 101. Develops carpentry skills in construction of garages, storage buildings, wood decks, patios, privacy fences and gazebos.

BCT 120 Woodworking Fundamentals 3 Credits
Prerequisites: None. An introductory study of the basic skills in woodworking. Emphasis is placed on safety, tool set-up and machine operations. Other topics include proper joinery and material selection.

BCT 121 Furniture Design and Construction 3 Credits
Prerequisites: BCT 120. Develops skills in the design, layout and construction of furniture. Students are introduced to furniture styles, types of materials used, and methods of construction.

BCT 122 Woodworking Jig Layout 3 Credits
Prerequisites: BCT 120. Develops skills in the design, layout and construction of holding devices, called jigs, used for special setups on the table saw, joiner band saw, and other woodworking machines. Each jig can be a single function, or a multi-functioning jig.

BCT 123 Furniture Framework 3 Credits
Prerequisites: None. Introduces the basic skills and technology of furniture construction, focusing on case construction, face frames and furniture legs.

BCT 124 Millwork 3 Credits
Prerequisites: BCT 120. Introduces the basic skills and technology of the production of wood products and focuses on machinery set-up and operations for making moldings, doorframes and picture frames.

BCT 125 Furniture Finishing and Repair 3 Credits
Prerequisites: None. Develops knowledge and skills in the technology of refinishing and repairing furniture. Introduces procedures used in stripping, bleaching, caning, veneering and wood fillers.

BCT 126 Furniture Door and Drawer Assembly 3 Credits
Prerequisites: BCT 120. An advanced class that develops skills in the design, layout, and construction of doors, drawers, and tabletops. Students are introduced to various types of hardware and installation methods.

BCT 127 Basic Theory of Paint and Stain 3 Credits
Prerequisites: None. Introduces the basic skills and techniques of finishing wood products, including proper preparation, staining and finishing procedures.

BCT 128 Woodworking Hobbies and Crafts 3 Credits
Prerequisites: None. Introduces the basic skills and techniques in layout and construction of small projects such as bookcases, file cabinets, and mantels. Introduces the skills in layout and assembly of small hobby projects such as kitchen accessories, and living room, bedroom decorations.

BCT 201 Residential Wiring 3 Credits
Prerequisites: CON 127. Covers the practice of residential wiring, including electrical service, metering equipment, lighting, switches, outlets and other common components, and methods of installation and maintenance of the residential wiring system in accordance with the current National Electrical Code.

BCT 202 Plumbing Fundamentals 3 Credits
Prerequisites: None. Studies the operation and function of the home plumbing system. Introduces pipe drawings and pipe layout and isometric blueprint reading symbols. Demonstrates how to rough in plumbing and install drainage, water systems, fixtures and water heaters in compliance with the plumbing code.

BCT 203 Masonry Concrete Fundamentals 3 Credits
Prerequisites: None. Covers materials and methods of construction with concrete block, brick, and forming for poured concrete. Includes study in the preparation of the building site.

BCT 205 Advanced Projects in Building Construction I 3 Credits
Prerequisites: CON 101 and CON 106. Applies problem solving to common problems in construction. Emphasizes the cooperation between several trades in the construction industry.

BCT 206 Advanced Projects in Building Construction II 3 Credits
Prerequisites: BCT 205. Applies problem-solving skills to common challenges in construction. Emphasizes the cooperation between several trades in the construction industry allowing students to practice necessary skills to resolve the problem. Concentrates on decision-making skills.

BCT 207 Carpentry-Light Commercial 3 Credits
Prerequisites: None. Introduces carpentry skills required in light commercial construction. Focuses on construction methods and materials used for office buildings, clinics, small churches and other non-residential structures.

BCT 211 Construction Organization and Procedures 3 Credits
Prerequisites: None. Introduces organization and management procedures focusing on subcontracting, equipment and tool inventories, job materials, codes, inspections and permits.

BCT 213 Motors and Motor Controls 3 Credits
Prerequisites: CON 127. Studies the wiring and design of motor control circuits, including circuit and conductor calculations, motor circuits and controls. Includes control transformers and service, circuit layout for motor controls and machine tool hookup and control.

BCT 214 Wall and Floor Coverings 3 Credits
Prerequisites: None. Covers modern materials and techniques of interior floor and wall coverings. Provides instruction on assessing the durability and maintenance of materials and techniques in correct installation procedures.

BCT 216 Advanced Residential Design 3 Credits
Prerequisites: Program Advisor Approval. Studies residential floor plans and elevation. Analyzes contemporary living patterns, cost, privacy, convenience and efficiency, coordinated with needs. Compares exterior styles for cost and aesthetic values. Studies multiple housing, duplex arrangements, apartments and condominiums. Provides students with opportunities to do floor plans, elevations, and perspective drawings to incorporate the conclusions reached from the above research.

BCT 219 Survey and Measurement 3 Credits
Prerequisites: CON 106 and demonstrated competency through appropriate assessment or earning a grade of "C" or better in MAT 050. Presents fundamentals of surveying, including use of transit, reading angles, land description, restrictions and legal problems. Covers topographical maps and their use.

BCT 220 Electrical Troubleshooting Techniques 3 Credits
Prerequisites: CON 127. Presents methods and techniques for trou-

bleshooting appliances, motors, motor controls, relay wiring, commercial wiring and industrial wiring systems.

BCT 221 Interior Trim   3 Credits
Prerequisites: CON 101. Develops basic knowledge, skills, and awareness of interior trim. Provides training in installation of drywall, moldings, interior doors, kitchen cabinets, and baseboard moldings.

BCT 222 Commercial/Industrial Wiring .   3 Credits
Prerequisites: CON 127. Covers wiring methods and material selection for commercial and industrial wiring systems. Studies include mechanical installation of hardware as well as electrical design and layout. Focuses on tool use, material selection, and installation of machines in the industrial setting.

BCT 223 Plumbing Design and Installation   3 Credits
Prerequisites: BCT 202. Provides techniques for working with pipes and fittings. Studies residential and commercial electrical hot water heating systems, private well water systems and electrical components of plumbing systems.

BCT 225 Fabrication   3 Credits
Prerequisites: Program Advisor Approval. Studies concepts and techniques of industrialized housing. Covers pre-fabrication, fabrication, jigs and rigging, including manufactured housing, sectional homes and modular homes.

BCT 228 Advanced Woodworking   5 Credits
Prerequisites: BCT 120. Applies problem-solving solutions in furniture construction, as well as cabinetry construction and installation.

BIO 06S Basic Life Sciences   3 Credits
Prerequisites: None. Corequisite: Demonstrated competency through appropriate assessment or earning a grade of "C" or better in ENG 031 and MAT 044. Introduces the scientific method and the basic concepts and terminology used in biology, microbiology, anatomy, physiology and organic chemistry which is related to life sciences. Prepares entering students who took no high school science or who took science several years ago for general education life sciences courses. Includes lab.

BIO 100 Human Biology   3 credits
Prerequisites: Demonstrated competency through appropriate assessment or earning a grade of "C" or better in ENG 025, ENG 032 and MAT 044. This course is a study of the biology of the human organism. It includes an examination of organizational complexity, development, health, and the place of humans in the natural world. Includes lab.

BIO 101 Introductory Biology   3 Credits
Prerequisites: Demonstrated competency through appropriate assessment or earning a grade of "C" or better in ENG 025, ENG 032 and MAT 050. Introduces the basic concepts of life. Includes discussion of cellular and organismal biology, genetics, evolution, ecology, and interac-

BIO 105 Biology I   5 Credits
Prerequisites: Demonstrated competency through appropriate assessment or earning a grade of "C or better" in ENG 025, ENG 032 and MAT 050. An in-depth overview of the principles of molecular and Mendelian genetics, concepts of Natural Selection in relation to evolution, and principles of population ecology and their effects on organismal diversity. Includes lab.

BIO 107 Biology II   5 Credits
Prerequisites: BIO 105. An in-depth overview of the principles of basic biochemistry, concepts of cell structure, cell metabolism, and cellular respiration, processes of DNA replication and gene expression, fundamentals of plant structure and function, principles of animal reproduction and development, and an overview of vertebrate anatomy. Includes lab.

BIO 110 Entomology   3 Credits
Prerequisites: Demonstrated competency through appropriate assessment or earning a grade of "C" or better in ENG 025, ENG 032, and MAT 050. This course will cover basic entomological concepts, including structure and function, behavior, evolution and ecology. Review of insect order and look at how insects interact with human societies. Includes lab.

BIO 121 General Biology I   4 Credits
Prerequisites: Demonstrated competency appropriate assessment or earning a grade of "C" or better in ENG 025, ENG 032 and MAT 050. Also, demonstrated competency in chemistry through appropriate assessment or successful completion of CHM 061. An introduction to those biological and chemical principles associated with cell structure and function, cell division, molecular and Mendelian genetics, enzyme function and energetics. An overview of natural selection, the structure, lifecycle and classification schemes of vascular plants will also be presented. Includes lab.

BIO 122 General Biology II   4 credits
Prerequisites: Demonstrated competency through appropriate assessment or earning a grade of "C" or better in ENG 025, ENG 032, and MAT 050. An introduction to those principles associated with evolution, form and function of plants and animals and ecology. The course will trace the evolution of organisms and explore plant structures, development and interaction with their environment. Students will look at anatomy, physiology, development and behavior of animals and will learn aspects of conservation biology. Includes lab.

BIO 201 General Microbiology   4 Credits
Prerequisites: BIO 101, BIO 105 or ANP 101 and earning a grade of "C" or better in MAT 050. Presents an in-depth overview of microbiology,

including fundamental structures of microorganisms, their metabolism, classification and interaction with other living things, and the laboratory techniques for their study. Introduces industrial and clinical applications of microbiology and clinically related areas of bacterial, viral, fungal, and parasitic involvement. Includes lab.

BIO 202 General Microbiology II   2 Credits
Prerequisites: BIO 201 or BID 211. A secondary study of microorganisms, including the characterization of bacterial growth and techniques of controlling microbial growth. Provides in-depth coverage of analytical and serological techniques commonly encountered in the microbiology laboratory. Includes lab.

BIO 211 Microbiology I   3 Credits
Prerequisites: BID 101 or ANP 101 and earning a grade of "C" or better in MAT 0SO. An overview of microbiology including fundamental structures of microorganisms, their metabolism, classification and interaction with other living things, and the laboratory techniques for their study. Introduces industrial and clinical applications of microbiology. Includes lab.

BIO 212 Microbiology II   2 Credits
Prerequisites: BID 211 and ANP 101. Presents a secondary study of bacteria, viruses, fungi, rickettsia, and parasites. Emphasizes the study of bacterial growth and control demonstrated by serological techniques. Includes lab.

BIO 220 Environmental Science   3 Credits
Prerequisites: Demonstrated competency through appropriate assessment or earning a grade of "C" or better in ENG 025, ENG 032 and MAT 044. Survey of the basic concepts of ecology, natural resources and ecosystems, relationships between humans and their natural environment, and the magnitude and scope of global environmental problems. Includes lab.

BIO 221 Molecular Biology   3 Credits
Prerequisites: BIO 121 or BIO 107. Corequisites: CHM 101 or CHM 105. An introduction to DNA, RNA and proteins and a review of their structures and functions, including their physical and chemical properties and their roles in cellular metabolism. The course will include an in-depth look at the synthesis of these molecules, as well as DNA replication, transcription and translation. Includes lab.

BNK 101 Principles of Banking   3 Credits
Prerequisites: Demonstrated competency through appropriate assessment or earning a grade of "C" or better in ENG 025, ENG 032 and MAT 044. Discussion ranges from fundamentals of negotiable instruments to contemporary issues and developments within the industry.

BNK 102 Law and Banking: Applications
and Principles   3 Credits
Prerequisites: Demonstrated competency through appropriate assess-

ment or earning a grade of "C" or better in ENG 025, ENG 032 and MAT 044. Introduces laws pertaining to secured transactions, letters of credit and the bank collection process. Provides a banker's guide to law and legal issues with special emphasis on the Uniform Commercial Code.

BNK 103 Consumer Lending   3 Credits
Prerequisites: Demonstrated competency through appropriate assessment or earning a grade of "C" or better in ENG 025, ENG 032 and MAT 044. Presents an insider's view of consumer lending, offering essential information about the maze of regulations that govern credit practices, and reviews loan processing, cross selling and collections.

BNK 216 Analyzing Financial Statements   3 Credits
Prerequisites: ACC 101. Provides a practical introduction to financial analysis from the viewpoint of the commercial loan officer and develops skills needed to effectively assess a borrower's ability to repay loans.

BNK 219 Bank Management   3 Credits
Prerequisites: BNK 101. Provides a complete introduction to the handling of day-to-day bank activities and incorporates case studies to help acquire bank management skills.

BNK 220 Trust Operations   3 Credits
Prerequisites: ACC 101 and BNK 101. Provides a broad, information framework intended to introduce students to quality trust operations workmanship in a time of accelerating change in the industry. The course presents the basics of trust operations providing an overview of: the Securities Industry and the reasons for its existence; the participants and terminology in the securities industry; Trust services, includes the types of trust accounts and the management and operations of trust services; Trust accounting principals, concepts, functions and controls; and the relationship between the Bank and the trust department.

BTN 100 Survey of Biotechnology   3 Credits
Prerequisites: Demonstrated competency through appropriate assessment or earning a grade of "C" or better in ENG 025, ENG 032 and MAT 044. Presents an in-depth overview of biotechnology emphasizing basic molecular techniques of manipulating DNA; processes involved in protein purification and analysis; microbial, plant, aquatic, medical and animal biotechnology; regulations and ethics of the biotechnology industry.

BTN 101 Introduction to Biotechnology   4 Credits
Prerequisites: BIO 121. Presents a basic overview of biotechnology emphasizing current DNA and RNA technologies and structure and function of biomolecules. The application of these techniques in the field of medicine, agriculture, forensics and environment is empha-

sized. Scientific methods, lab safety and regulations and ethics of the biotechnology industry will also be covered. Includes lab.

BTN 103 Safety and Regulatory Compliance
for Biotechnology   3 Credits
Prerequisites: BIO 105 or BIO 121 or CHM 101 or CHM 105 or CHM 111. Overview of laboratory safety procedures and precautions, biosafety, radiation safety, compliance standards of regulatory agencies. Emphasis will be placed on understanding the regulatory environment of pharmaceutical, diagnostic and agricultural research and manufacturing. Students will be introduced to the agencies in the U.S. responsible for regulatory oversight of biotechnology. Concepts of current good laboratory practices (cGLP), current good manufacturing practices (cGMP), standard operating procedures (SOP) and validation will be addressed as they apply to industry.

BTN 104 cGMP and Quality Compliance   3 credits
Prerequisites: BIO 121 or Program Chair Approval. Overview of current good manufacturing practices in the global pharmaceutical industry. Emphasis will be placed on the understanding of the similarities and differences between the good manufacturing practice requirements in the United States, Europe, Canada and Japan. Students will also explore the different quality systems and processes needed in the pharmaceutical industry.

BTN 201 Cell Culture and Cellular Processes   4 Credits
Prerequisites: BTN 101 and CHM 105 or CHM 111. An introduction to major biochemical pathways, cellular structure and function at a molecular level. Topics to be considered include the structure and function of the cell membrane, cytoskeleton and various organelles. Cellular respiration will be discussed. Protein synthesis, processing and export will be examined. Those processes involved in cell division will also be investigated and related to cancer. The laboratory will center upon techniques involving animal, plant, fungi and bacterial cell cultures. Students will be taught how to isolate, culture and preserve prokaryotic organisms. Students will be taught how to maintain and preserve eukaryotic cell cultures. Students will learn to procure cell cultures from ATCC and other repositories. Includes lab.

BTN 211 Analytic Methods in Biotechnology I   3 Credits
Prerequisites: BTN 101 and CHM 105 or CHM 111. Theory and application of many analytical methods currently utilized in the field of biotechnology. These methods will include: ELISA and immunoaffinity techniques; methods for determining enzymatic activity; spectrophotometric methods; chromatographic methods; electrophoresis; light and electron microscopy. When feasible, techniques will be practiced in the laboratory setting. Methods utilizing radioactive isotopes will be discussed. Considerable emphasis will be placed on proper methods for data recording, analysis and presentation. Includes lab.

BTN 212 Analytic Methods in Biotechnology II   3 Credits
Prerequisites: BTN 211. Theory and application of many analytical methods currently utilized in the field of biotechnology. These methods will include: centrifugation, light and electron microscopy, restriction endonuclease digestion, agar and acrylamide electrophoresis of nucleic acids, Southern and Northern blotting, polymerase chain reaction and bioassays. When feasible, techniques will be practiced in the laboratory setting. Methods utilizing radioactive isotopes will be discussed. Considerable emphasis will be placed on proper methods for data recording, analysis and presentation. Includes lab.

BTN 217 Biotechnology Manufacturing
Processes   3 Credits
Prerequisites: Program Advisor Approval. Introduction to the processes and procedures involved in the manufacture of biological molecules on both large- and small-scales. The student will learn the function of commonly used manufacturing equipment associated with biotechnology and understand the cGMP's associated with the use of such equipment. The regulatory environment associated with most biotechnology endeavors will be reviewed including those mandated by FDA, USDA and OSHA.

BTN 220 Molecular Biology Lectures   3 Credits
Prerequisites: BIO 121 and CHM 106. Introduces DNA, RNA and proteins and review their structures and functions, including their physical and chemical properties and their roles in cellular metabolism. The course will include an in-depth look at the synthesis of these molecules, as well as DNA replication, transcription and translation.

BTN 221 Microbiology   3 Credits
Prerequisites: BIO 121 and CHM 106. Corequisites: BTN 222. Presents an overview of microbiology including fundamental structures of microorganisms, their growth, metabolism, interaction with other living things, and classification. Emphasis placed on industrial applications of microbiology.

BTN 222 Microbiology Laboratory   2 Credits
Prerequisites: BIO 121 and CHM 106. Corequisites: BTN 221. A conventional laboratory of exercises, demonstrations and discussions. Laboratory exercises are designed to enable students to achieve proficiency in the principles and techniques necessary for cultivation of microorganisms using aseptic techniques and for performing and interpreting biochemical tests. The laboratory exercises will be filled out weekly and turned in to be graded.

BTN 227 Genetic Engineering and
DNA Analysis   4 Credits
Prerequisites: BTN 201 or BTN 211. The essential concepts and techniques in genetic engineering. Students will practice essential gene cloning procedures: isolation of DNA, restriction endonuclease digestion, agarose gel electrophoresis analysis, DNA ligation, and transfor-

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mation into a host strain. Other essential techniques such as PCR, construction and screening of genomic or cDNA libraries, Southern and Northern blot analyses will be practiced. Students will understand the principles and ethical issues of animal or human cloning practices. Current methods for transfer and propagation of genes into plants and animals will be discussed. Various gene knockout techniques such as homologous gene recombination, site-directed mutagenesis, and RNAi will be introduced. The topics in genomics, proteomics, and bioinformatics will be discussed. Includes lab.

BTN 231 Industrial Processes and Fermentation   4 Credits
Prerequisites: Program Advisor Approval. An introduction to fermentation processes used for commercial purposes and the operation of small- and large-scale fermentors. Methods used to harvest product from fermentors and the regulatory requirements associated with commercial fermentation will also be explored. Includes lab.

BTN 233 Protein Analysis and Purification   4 Credits
Prerequisites: BTN 201 or BTN 211. Students will review the biochemical properties of amino acids and proteins, then study techniques of cell disintegration and extraction, protein separation, and analysis. Students will be taught to determine which method is most applicable in various situations and why that method should be utilized. When possible, students will be given an opportunity to perform these techniques in the laboratory. Includes lab.

BTN 235 Biotechnology Laboratory   3 Credits
Prerequisites: BIO 107 and CHM 105. Corequisites: BIO 221. Presents an in-depth overview of basic biotechnology laboratory skills emphasizing chromatography techniques, methods of DNA and protein electrophoresis, processes of immunoassays, data management skills, recombinant DNA technology, and the polymerase chain reaction.

BTN 241 Immunology and Immunological Processes   4 Credits
Prerequisites: BTN 211. A brief survey of the components of the immune system and how they interact. The topics covered will include, B and T cell development, activation and culture, the role of cytokines, their production and purification, signal transduction processes in B-cell activation, the role of MHC complexes, immunoglobulin synthesis and origins of diversity, antigenantibody interactions, practical aspects of raising and purifying polyclonal and monoclonal antibodies, handling and labeling of antibodies, applications of antibodies including Western blotting, ELISA, and immunohistochemistry. Includes lab.

BTN 280 Co-op/Internship   2-6 Credits
Prerequisites: Program Advisor Approval. Provides students with the opportunity to work at a job site that is specifically related to their career objectives. Provides on-the-job experience while earning credit toward an associate degree.

BUS 101 Introduction to Business   TransferIN 3 Credits
Prerequisites: Demonstrated competency through appropriate assessment or earning a grade of "C" or better in ENG 025, ENG 032 and MAT 044. Examines the American business system in relation to the economic society. Studies business ownership, organization principles and problems, management, control facilities, administration, and development practices of American business enterprises.

BUS 102 Business Law   3 Credits
Prerequisites: Demonstrated competency through appropriate assessment or earning a grade of "C" or better in ENG 025 and ENG 032. Describes the judicial system and the nature and sources of law affecting business. Studies contracts, sales contracts with emphasis on Uniform Commercial Code Applications, remedies for breach of contract and tort liabilities. Examines legal aspects of property ownership, structures of business ownership, and agency relationships.

BUS 104 Investment   3 Credits
Prerequisites: Demonstrated competency through appropriate assessment or earning a grade of "C" or better in ENG 025 and ENG 032. An introduction to the fundamentals of investing. Presents the basis of investing, with attention to the various ways in which investment vehicles operate.

BUS 105 Principles of Management   3 Credits
Prerequisites: Demonstrated competency through appropriate assessment or earning a grade of "C" or better in ENG 025, ENG 032 and MAT 044. Describes the functions of managers, including the management of activities and personnel. Focuses on application of guidance principles in management.

BUS 106 Customer Service   3 Credits
Prerequisites: Demonstrated competency through appropriate assessment or earning a grade of "C" or better in ENG 025, ENG 032, and MAT 044. Focuses on the importance of providing superior customer service to the organization as well as the customer service representative. Fundamental customer service techniques applicable to a variety of situations are presented.

BUS 108 Personal Finance   3 Credits
Prerequisites: Demonstrated competency through appropriate assessment or earning a grade of "C" or better in ENG 025, ENG 032, and MAT 044. Emphasizes management of individual financial resources for growth and maintenance of personal wealth. Covers home buying and mortgage financing, installment financing, life and health insurance, securities, commodities and other investment opportunities.

BUS 120 Business Ethics and Social Responsibility   3 Credits
Prerequisites: BUS 101. An examination of individual, organizational and societal ethical issues and the social responsibility of business organizations in the resolution of these issues. Critical thinking and informed decision making are emphasized.

BUS 202 Human Resource Management   3 Credits
Prerequisites: BUS 105. Focuses on the activities of human resource management, with emphasis on employer-employee relations, job analysis and evaluation, salary administration, work measurement and standards, performance appraisal and legal compliance.

BUS 203 Business Development   3 Credits
Prerequisites: BUS 105, MKT 101 and ACC 101. Explores business operations for the self-employed or as a manager of a small business enterprise. The course includes: covering the role of entrepreneur and manager; selecting the appropriate business organization; developing plans and strategies for small, medium, and growing firms; securing financing for start-up and growing operations; exploring growth opportunities; and successfully managing human and material resources.

BUS 204 Case Problems in Business   3 Credits
Prerequisites: Program Chair Approval. Applies business concepts and principles to specific case studies or problems.

BUS 205 Risk Management   3 Credits
Prerequisites: BUS 101, BUS 102 and MAT 050. Examines the risks faced by businesses and individuals; it then considers ways of handling them. Topics covered include property, liability and personal losses that may result due to assuming these risks. Much attention is paid to the use of insurance contracts in reducing the impact of the possible losses. Specific areas include automobile, home, life, health, and pension insurance as well as public policy, government regulations, and social insurance programs.

BUS 207 Introduction to International Business 3 Credits
Prerequisites: BUS 101. Provides an overview of the international environment in which business operates today. Demonstrates the global relationships between business activities and how events in one part of the world can influence business decisions and activities in other parts of the world.

BUS 208 Organizational Behavior   3 Credits
Prerequisites: BUS 105. Studies human behavior in organizations at the individual and group level, including the effects of organizational structure on behavior. Focuses on using organizational behavior concepts for developing and improving interpersonal skills.

BUS 209 Introduction to e-Business 3 Credits

Prerequisites: BUS 101 and CIS 101. Focuses on how e-business is being conducted and managed, its major opportunities, limitations, issues and risks. E-business applications to be discussed include those of business to consumer, business to business, and intra business. Because e-business is interdisciplinary, subject matter will be directed at managers, professionals, and students who wish an overview of the e-business potential.

BUS 210 Managerial Finance 3 Credits

Prerequisites: ACC 101 and BUS 101, and MAT 111 or higher. An introductory course in the principles of financial management. Develops decision-making skills related to the financial resources of a firm. Includes techniques of financial analysis, time value of money, capital budgeting, risk and return.

BUS 212 Organizational Leadership 3 credits

Prerequisites: BUS 105. Introduction and overview of fundamental concepts of effective leadership in formal organizations.

BUS 213 Management in Non-Profit Organization 3 Credits

Prerequisites: BUS 105. This course is designed to introduce the student to the purpose and function of non-profit organizations. Students will apply planning, organization, leadership and control techniques as they apply to the non-profit sector.

BUS 220 Conference Leadership Training 3 Credits

Prerequisites: None. Stresses the importance of the conference in business and industry. Emphasizes the practical application of the various techniques of conference leadership and an understanding of group dynamics in the conference setting.

BUS 221 Principles of Employment 3 Credits

Prerequisites: BUS 202. An in-depth look at the employment process. Emphasis will be placed on the role of recruiting, selecting and training of employees. Techniques in job analysis, behavioral interviewing and on-the-job training will be studied in much detail.

BUS 222 Benefits Administration 3 Credits

Prerequisites: BUS 202. Provides an in-depth look at benefit administration. Topics include vacations, holiday pay, insurance, retirement programs and other employee inducements. Emphasis will be placed on cost of benefits in relationship to the overall compensation package. The course will also look at the relevance of reward and recognition and pay structures.

BUS 223 Occupational Safety and Health 3 Credits

Prerequisites: BUS 105. A look at the importance of safety and health in the workplace. The Occupational Safety and Health Act of 1970 will be examined in depth with relationship to businesses and their employees. Emphasis will be placed on effective practices, costs, labor and management responsibilities, health hazards, alcohol and drug abuse, worker's compensation, physical conditions, and training.

BUS 227 Logistics/Supply Chain Management 3 Credits

Prerequisites: BUS 101. A study of the basic concepts included in the field of logistics and supply chain management. Topics covered include: supply chain strategy, planning and design, customer service, transportation, purchasing, forecasting, inventory and warehouse management, and financial control of logistics performance.

BUS 228 Principles of Purchasing 3 Credits

Prerequisites: BUS 101. Designed to teach the basics of purchasing management. Topics covered include: the challenge of purchasing and materials management, objectives and organization, function, specification, quality control and inspection, supplier evaluation, selection, and measurement, supplier development, strategic cost management, contracts and negotiation, purchasing relationships, purchasing transportation, purchasing laws and ethics, and global sourcing.

BUS 229 Transportation Systems 3 Credits

Prerequisites: BUS 101. Examines the structure and importance of the commercial transportation industry in the logistics sector of business. Topics covered include an in-depth examination of the various modes of transportation including discussions of regulations, economics, characteristics, and development in major transportation modes. Also discussed are costing and pricing issues in transportation and relationship management between buyers and sellers of transportation.

BUS 230 Business Statistics 3 Credits

Prerequisites: BUS 101 and MAT 111 or higher. Designed to build student competence in the areas of descriptive and inferential statistics, through emphasis on the application of these statistical methods. Includes an examination of data, probability of occurrence, and basic sampling processes. Uses statistical methods to model results and uses these models for forecasting. Tests to examine the appropriateness of these techniques are introduced.

BUS 231 Business Statistics II 3 Credits

Prerequisites: BUS 230. Corequisites: MAT 201. Focuses on Chi-Square applications, linear regression, multiple regression, and an analysis of variance. Students will be expected to apply a statistical package to topical applications.

BUS 235 SHRM Certification Preparation 3 Credits

Prerequisites: Program Advisor Approval. Prepares students to sit for the Professional in Human Resources (PHR) certification exam sponsored by the Society for Human Resource Management.

BUS 280 Co-op/Internship 1-6 Credits

Prerequisites: Program Advisor Approval. Gives students the opportunity to work at a job site that is specifically related to their career objectives. Provides on-the-job experience while earning credit toward an associate degree.

CEP 101 Introduction to Homeland Security 3 Credits

Prerequisites: None. The course provides students and practitioners with a comprehensive account of past and current homeland security practices, policies, and programs in relation to the government restructure. Topics include workplace security, weapons of mass destruction, domestic and international terrorism, and preparedness.

CEP 102 Principles of Emergency Management and Planning 3 Credits

Prerequisites: None. The purpose of this course is two-fold: to introduce concepts and basic descriptive information about the political system within the context of disaster policy and to demonstrate how political factors play a role in all phases of emergency management—regardless of the type or nature of the disaster event. To achieve these goals the course provides practical information drawn from disaster policy studies and case studies. This information is (wherever possible) reviewed for findings that can be generalized, that is, for lessons that are applicable to future disasters and emergencies.

CEP 103 Basic Skills in Emergency Program Management 3 Credits

Prerequisites: None. The purpose of this course is to teach those considering a career in emergency management about, the nature and reasons for the public's awareness of hazards and preparedness for disasters. The variety of actions taken by individuals, private and voluntary organizations, and the government to both prepare the public for the impact of disasters and provide realistic strategies to mitigate their adverse consequences.

CEP 104 Disaster and Terrorism Awareness 3 Credits

Prerequisites: None. This course is an introduction to political terrorism, ranging from low-level acts of threats and acts of violence that may represent significant risk to human life and property to large-scale acts of violence using "weapons of mass destruction" that may have devastating, long-term effects. The course will address the following, the nature of terrorism and its many forms, policies and programs to reduce the risk that terrorism presents to society, and policies and programs to manage terrorist events, and how to manage the consequences of terrorist violence.

CEP 105 Introduction to Mitigation 3 Credits

Prerequisites: None. The course is designed to provide an understanding of the principles and practice of hazard mitigation in the United States at the local, state, regional, and federal levels of governance, emphasizing the importance of avoiding or preventing future and recurring losses of life and damage to public and private property. A further objective is to familiarize students with the tools, techniques,

resources, programs, intergovernmental relationships, and broader social context involved in planning for and implementing hazard mitigation.

CEP 106 Disaster Response and Recovery Operations 3 Credits
Prerequisites: None. This course addresses future approaches to reducing damage from natural hazards, aimed at breaking the vicious cycle of disaster/rebuilding/disaster through pre-disaster hazard mitigation programs and policies. These proactive approaches seek to stem the tide of losses from repetitive damage incurred by development within known hazard areas, such as floodplains, storm surge areas, and earthquake fault zones. We will also look at disaster policy that focus on preparing for an imminent disaster, through evacuation and temporary property protection; responding to a disaster that has occurred, through search and rescue and debris clearance; and recovering from a past disaster, through rebuilding damaged structures.

CEP 107 Exercise Program Design, Planning and Evaluation 3 Credits
Prerequisites: None. This course is designed to introduce you to the fundamentals of exercise design and to prepare you to design and conduct a small functional exercise. The concept of the Exercise Design Course is based on one important premise: emergency exercises are worth the effort. Experience and data show that exercises are a practical, efficient, and cost-effective way for a community to prepare for disasters. It includes: the value of conducting exercises, the components of a comprehensive exercise program, and the exercise development process-development tasks, organization of the design team, exercise documentation, and the steps in designing an exercise. The course will also cover the purpose, characteristics, and requirements of three main types of exercises, table top, functional, and full scale exercises and the evaluation of the exercise.

CEP 210 Understanding and Combating Terrorism 3 Credits
Prerequisites: None. This course is designed to introduce the hazards of terrorism, the history and nature of terrorism. The response to terrorism and the duties and functions of the emergency manager will be explored. The course will also look at current U.S. efforts of homeland security and its impacts on the field of emergency management. We will discuss the basic aspects of nuclear, chemical and biological terrorism.

CEP 212 Homeland Security Intelligence Operations and Tactical Skills 3 Credits
Prerequisites: None. This course is designed to explore the role of intelligence and law enforcement, collection methods, cycle, management operations, classification, production and analysis, assessment of tar-

gets and threat vulnerability, source development and adjudication as it relates to Homeland Security and Terrorism.

CEP 213 Weapons of Mass Destruction and Hazardous Materials 3 Credits
Prerequisites: None. Unique features of terrorist attacks include psychogenic casualties, significant risk to responding personnel, multiple jurisdictions and the criminal nature of the event. This course will prepare the emergency manager to better understand the threat created by terrorism and weapons of mass destruction. The successful emergency manager must recognize the threat of terrorism and WMD and be able to mitigate and prepare for such disasters to bring order to potential chaos. We will also look at various types of biohazards.

CEP 214 Understanding the Incident Command System 3 Credits
Prerequisites: None. This class will emphasize command and control of major emergencies operations at an advanced level, linking operations and safety. Areas of study include: Incident Management System, Pre-incident planning, Size up, command Systems, Sectoring Functions, Staging, Safety Officer, Command Post, Communications, News Media, Computer Aided Resources. We will utilize simulated incidents, requiring the applications of appropriate solutions to resolve the incident.

CEP 215 Contingency Planning and Incident Command 3 Credits
Prerequisites: None. This course is designed to teach the students how to develop an emergency response contingency plan for a facility or community. Preparedness includes analyzing the hazards, writing and implementing the contingency plans, training employees for an emergency, and evaluating the effectiveness of the contingency plan.

CEP 216 Public Information Officer Course 3 Credits
Prerequisites: None. The Public Information Officers Course is aimed at the new or less experienced PIO including those individuals who have function as a secondary responsibility. Course topics include an overview of the job of the PIO, understanding the media, interview techniques, writing a news release and conducting public awareness campaigns. Additional application of public information skills to a major emergency or disaster situation will be discussed. This is accomplished with a series of lecture presentations and exercises over the course.

CEP 257 Preparedness Practicum 3 Credits
Prerequisites: None. This course is designed to address recently identified current events, skills, knowledge and behaviors pertinent to the technology or occupation and relevant to the professional development of the student. The student will demonstrate an understanding

of the vocabulary, terminology and appropriate planning/administrative controls specific to the field.

CHM 061 Basic Chemistry 3 Credits
Prerequisites: Demonstrated competency through appropriate assessment or earning a grade "C" or better in ENG 032 and MAT 050. Provides students with an introduction to chemistry basics. Provides instruction for students with little or no recent chemistry background, especially those desiring to continue in more advanced chemistry courses or other science courses. Includes lab.

CHM 101 Introductory Chemistry I 3 Credits
Prerequisites: Demonstrated competency through appropriate assessment or earning a grade of "C" or better in ENG 025, ENG 032 and MAT 050. An introductory course that includes the science of chemistry and measurement, atomic theory and the periodic table, chemical bonding, equation writing and balancing, stoichiometry, and gases. Includes lab.

CHM 102 Introductory Chemistry II 3 Credits
Prerequisites: CHM 101. Includes liquids and solids, solutions and solution concentrations, acids and bases, equilibrium, nuclear chemistry, and organic and biochemistry. Includes lab.

CHM 105 General Chemistry I 5 Credits
Prerequisites: MAT 111 and demonstrated competency through appropriate assessment or earning a grade of "C" or better in ENG 025 and ENG 032. Corequisite: MAT 132 or MAT133 or MAT 136. The first in a series of two introductory courses designed to cover general chemistry including measurement, atoms, molecules and ions, stoichiometry, chemical reactions, solids, liquids, and gases thermochemistry, atomic structure, and molecular bonding. Includes lab.

CHM 106 General Chemistry II 5 Credits
Prerequisites: CHM 105 and MAT 132 or MAT 133 or MAT 136. The second in a series of two introductory courses designed to cover general chemistry including kinetics, equilibria, acid/ base chemistry, thermodynamics, electrochemistry, nuclear chemistry, organic chemistry and descriptive inorganic chemistry. Includes lab.

CHM 111 Chemistry I 4 Credits
Prerequisites: MAT 111 and demonstrated competency through appropriate assessment or earning a grade of "C" or better in ENG 025 and ENG 032. An introductory course that includes the science of chemistry and measurement, atomic theory and the periodic table, chemical bonding, stoichiometry, liquids and solids, gases and the ideal gas law, solutions, and acids and bases. Includes lab.

CHM 112 Chemistry II 4 Credits
Prerequisites: CHM 111 or CHM 101. Further explores concepts of equilibrium. Includes chemistry of metals and nonmetals, environmental chemistry, nuclear chemistry, organic and biochemistry. Includes lab.

CHM 113 Introductory Organic and Biochemistry 3 Credits

Prerequisites: CHM 101 or CHM 111. The basic principles of organic and biochemistry are discussed. This will include the basic concepts of nomenclature and reaction equations that are necessary for understanding biochemistry. The ability to name and draw chemical structures and to write reactions for organic equations will be evaluated. Elements of biochemistry will include the basic analysis of biochemical structures and the reactions involved in the metabolic processes. Includes lab.

CHM 204 Lectures in Organic Chemistry 3 Credits

Prerequisites: CHM 106. A one-semester survey course designed to introduce organic chemistry including nomenclature, spectroscopy, stereochemistry, reactions, and mechanisms.

CHM 211 Organic Chemistry I 5 credits

Prerequisites: CHM 106. The first in a series of two courses designed to cover organic chemistry including the properties, syntheses, and reactivity of aliphatic and aromatic compounds. The course includes an introduction to organic chemistry lab techniques covering the synthesis, purification, and characterization of organic compounds. Includes lab.

CHM 212 Organic Chemistry II 5 credits

Prerequisites: CHM 211. The second in a series of two courses designed to cover an understanding of organic chemistry including the properties, syntheses, and reactivity of aliphatic and aromatic compounds, polyfunctional natural products such as carbohydrates, and peptides. The course includes various organic chemistry lab techniques covering the synthesis, purification, and characterization of organic compounds. Includes lab.

CHT 101 Industrial Laboratory Techniques 3 Credits

Prerequisites: CHM 101. Introductory course dealing with basic skills needed in the industrial laboratory such as basic lab safety, identification, care and operation of basic laboratory equipment including pH meters, spectrophotometers, glassware, and definition and preparation of reagents. Includes laboratory exercises in the use of selected equipment. Includes lab.

CHT 170 Success in Science 1 Credit

Prerequisites: None. Introductory course covering the basics of the chemical process industry including career paths, business components and ethical standards. Scientific literature searches and safety issues are discussed.

CHT 201 Industrial Instrumentation and Techniques I 3 Credits

Prerequisites: CHT 101 and CHM 101. Addresses theoretical aspects of industrial laboratory instrumentation, including gas and liquid chromatography (GC and LC), high performance liquid chromatography (HPLC), infra-red (IR) spectrophotometry and atomic absorption (AA). Presents theories and laws that govern the way instruments operate. Includes student experimentation on various analytical instruments. Includes lab.

CHT 202 Industrial Instrumentation and Techniques II 3 Credits

Prerequisites: CHT 201. Continues the theoretical study of CHT 201 by addressing industrial applications of laboratory instrumentation, including gas and liquid chromatography (GC and LC), high performance liquid chromatography (HPLC), infra-red (IR) spectrophotometry and atomic absorption (AA). Presents automation techniques, including sampling, data collection and analysis. Covers the laws that govern the way instruments operate. Includes student experimentation on various analytical instruments. Includes lab.

CHT 204 Presentation of Technical Issues 3 Credits

Prerequisites: Program Advisor Approval. Focuses on solving problems in chemical technology settings including the analysis of the problem, generation of creative solutions and effective presentation of proposed solutions. Includes lab.

CHT 207 Food, Drugs and Polymers 3 Credits

Prerequisites: CHM 102 and CHT 101. A survey course designed for advanced students, this course covers the basics of Food Science, Polymer Science and Pharmaceutics.

CHT 210 Quantitative Analysis 3 Credits

Prerequisites: CHM 101 and CHM 102. Investigates techniques for quantitative analysis of samples including their applications in industrial settings. Includes techniques such as gravimetric analysis, neutralization, oxidation-reduction titrations, potentiometric measurements and complexing titrations. Includes lab.

CHT 270 Professional Development 1 Credit

Prerequisites: CHT 101. Designed to be taken the semester before students begin looking for a job. Its purpose is to help students with the professional skills required in scientific industries.

CHT 280 Internship 3 Credits

Prerequisites: Advisor Approval. Students work at a job site that is specifically related to his/her career objectives. Provides extensive job experience while earning credit towards an associate degree. Students will also participate in a once a week seminar.

CIM 102 Introduction to Robotics 3 Credits

Prerequisites: None. Corequisite: TEC 104. Introduces students to robotics and automated systems and their operating characteristics. Covers robotics principles of operation and work envelopes. Teaches coordinate systems and how hydraulic, pneumatic and electromechanical systems function together as a system. Covers servo and non-servo controls, system capabilities and limitations and safety.

CIM 202 Work Cell Design and Integration 3 Credits

Prerequisites: CIM 102. An advanced course which provides instruction in selecting equipment, writing specifications, designing fixtures and interconnects, integrating systems, providing interfaces and making the assigned systems operational.

CIM 203 Automation Electronics 3 Credits

Prerequisites: MIT 205. Interface Programmable Controllers (PLC's) with analog I/0 devices. Tune Proportional Integral Derivative (PID) loops. Analyze 4 -20 mA current circuitry of a thermal process. Achieve process control with PLC analog input/output controls using a human machine interface. Program on-line and off-line via PLC networking.

CIM 205 Automated Manufacturing Systems 3 Credits

Prerequisites: CIM 202 and CIM 203. Covers basic principles and applications for planning and controlling production operations and improvement programs. Includes system characteristics and solutions for production process and service operation problems; methods analysis; cost estimating; facilities planning, tooling and services acquisition and maintenance; production, project and program scheduling; materials and inventory management; safety and loss prevention; decision-making tools and evaluation of alternatives.

CIS 074 Computer Literacy 3 Credits

Prerequisites: None. Provides a general survey of computer basics. Includes the survey and analysis of microcomputer components, compares and contrasts computer applications, investigates software options, expose students to hardware peripherals and introduces students to Windows and office applications.

CIS 100 Using Windows Environment 1 Credit

Prerequisites: None. Introduces the basic concepts of Windows and Windows-based applications. The student will acquire the necessary concepts for accomplishing the most commonly used tasks, such as creating folders, copying, deleting and moving files from one folder to another or from a folder to an auxiliary storage medium. The student will also be introduced to Windows applets. The course includes Internet and e-mail operations and an introduction to simple word processing and spreadsheet applications.

CIS 101 Introduction to Microcomputers Transfer IN 3 Credits

Prerequisites: Demonstrated competency through appropriate assessment or earning a grade of "C" or better in ENG 031. Introduces the physical components and operation of microcomputers. Focuses on computer literacy and provides hands-on training in four areas of microcomputer application software: word processing, electronic spreadsheets, database management and presentation software. Use of a professional business integrated applications package is emphasized.

CIS 102 Information Systems Fundamentals   3 Credits
Prerequisites: Demonstrated competency through appropriate assessment or earning a grade of "C" or better in ENG 031. Introduces information processing and programming with emphasis on hands-on computer experience. Examines the role of information processing in an organization including: information processing applications, computer hardware and software, internal data representation, stored program concepts, systems and programming design, flowcharting, and data communications. Review the history of computers, related computer careers, the social impact of computers, and computer security.

CIS 107 Microcomputer Programming   3 Credits
Prerequisites: CIS 102. Corequisite: CIS 113. Introduces a structured microcomputer language. Concepts in input/output commands, arithmetic expressions, conditional control, iteration techniques and subroutines will be stressed. Concepts will be incorporated into the application of solving business problems.

CIS 111 Computer Business Applications   3 Credits
Prerequisites: CIS 125 and COM 101 or CIS 125 and COM 102. Corequisites: CIS 203. Requires students to apply business, microcomputer and communication skills within business applications. Emphasizes application of several forms of computerized information processing including data processing, word processing, spreadsheets, graphics and communications. Analyzes the effects of automation on the office worker, management, and the work environment, and requires written and oral presentations.

**CIS 112 Introduction to Simulation
and Game Development   3 Credits**
Prerequisites: CIS 121. Provides a basic understanding of the fundamentals of creating simulation and game design and programming. Discussions will include use for simulations and game programming, using game libraries, and interfaces used in programming. This course focuses on 2D simulations and games which include many real-time and turn-based strategy games.

CIS 113 Logic, Design and Programming   3 Credits
Prerequisites: Demonstrated competency through appropriate assessment or earning a grade of "C" or better in ENG 031. Introduces the structured techniques necessary for efficient solution of business-related computer programming logic problems and coding solutions into a high-level language. Includes program flowcharting, pseudocoding, and hierarchy charts as a means of solving these problems. The course covers creating file layouts, print charts, program narratives, user documentation, and system flowcharts for business problems. Reviews algorithm development, flowcharting, input/output techniques, looping, modules, selection structures, file handling, and control breaks. Offers students an opportunity to apply skills in a laboratory environment.

**CIS 114 Principles of Management Information
Systems   3 Credits**
Prerequisites: CIS 102 and BUS 101. Examines the functions and operations required to manage information for business decisions. Focuses on the use of various information technologies and tools that support transaction processing, decision-making and strategic planning. The diverse information needs of different organizations within a business will be used as examples of practical applications of MIS technology.

CIS 118 Introduction to COBOL Programming   3 Credits
Prerequisites: Program Advisor Approval. Provides an introduction to COBOL (Common Business Oriented Language) with major emphasis on developing structured programming skills. Develops proficiency in applying the programming development cycle to elementary business problems.

CIS 121 C/C++/C# Programming   3 Credits
Prerequisites: CIS 113. Provides a basic understanding of the fundamentals of procedural program development using structured, modular concepts. Emphasizes logical program design involving user-defined functions and standard structure elements. Discussions will include the role of data types, variables, structures, addressable memory locations, arrays and pointers. Data file access methods are also presented.

CIS 122 RPG Programming Fundamentals   3 Credits
Prerequisites: CIS 102 and CIS 113. Provides a general introduction to the RPG programming language with emphasis on hands-on programming experience. Presents the most important features of the RPG language from input/output processing to applications requiring handling. Introduces language concepts in class lecture. Includes programming lab assignments.

CIS 123 Assembler Language Programming   3 Credits
Prerequisites: CIS 102 and CIS 113. Gives students a basic understanding of the assembler process using IBM mainframe computers. Stresses the importance of byte-wise manipulation of data fields when using low-level languages. Emphasizes the actual workings of a computer during the execution of a computer program. Discusses the role of data types, EBCDIC format of data storage and addressable memory locations.

CIS 124 Pascal Programming   3 Credits
Prerequisites: CIS 113. Provides a basic understanding of the structured programming process necessary for successful Pascal programming. Emphasizes top-down program design and modularity using Pascal procedures, functions and independent subprograms. Discuss simple and advanced data types and program control aids, algorithm development and program debugging. Provides students with a fundamental understanding of good programming technique and a basic knowledge of Pascal syntax and structure.

CIS 125 Database Design and Management   3 Credits
Prerequisites: Demonstrated computer proficiency through appropriate assessment or successful completion of CIS 101. Introduces program applications in a database environment and includes discussion of data structures; indexed and direct file organizations; data models, including hierarchical, network, and relational; storage devices, data administration and analysis; design and implementation. Using database software, students have hands-on experience creating, modifying, retrieving and reporting from databases. Students may also develop a business application using a database language.

**CIS 126 Shell Command Language for
Programmers   3 Credits**
Prerequisites: CIT 109 or CIT 201. Teaches students how to write, test and debug shell procedures on a computer utilizing a UNIX operating system. Presents the shell and how it works, shell processes, variables, keyword and positional parameters, control constructs, special substitutions, pipelines, debugging aids, error/interrupt processing and shell command line. Offers students the opportunity to apply skills in a laboratory environment.

**CIS 127 Midrange/Mainframe Database
Management Systems   3 Credits**
Prerequisites: Demonstrated computer proficiency through appropriate assessment or successful completion of CIS 101 and CIS 102. Presents an overview of relational database models with emphasis on midrange /mainframe management systems (DBMS). Using a variety of database tools, the student receives practical experience in creating, modifying, retrieving and reporting from databases. Students also develop business applications using the database language.

CIS 130 Seminar I   1 Credit
Prerequisites: Program Advisor Approval. Discusses topics of current interest in computerized information management with emphasis on applications of information management skills during lab time. Identifies and offers various seminar topics each term under this course number.

CIS 131 Structured Query Language   3 Credits
Prerequisites: CIS 125 or CIS 127. SQL is now a dominant language used in mainframe, mini, and microcomputer databases (Access, dBASE, paradox, DB2, FoxPro, Oracle, SQL Server, and Btrieve) by diverse groups such as home computer owners, small businesses, large organizations, and programmers. It acts as a bridge between the user, the database management system, the data tables and transactions involving all three.

CIS 132 Graphical User Interface: Windows   3 Credits
Prerequisites: Program Advisor Approval. Provides a foundation of fundamental concepts in the use of GUI – type software. Explores the Windows operating system, accessories, and various operating system

applications. Develops proficiency with Windows operations including customizing the environment, integrating operating systems applications, and managing files.

CIS 136 Introduction to Java Programming 3 Credits
Prerequisites: CIS 113. Provides a basic understanding of the fundamental concepts involved when using a member of a Java programming development language. The emphasis is on logical program design using a modular approach involving task oriented program functions. Java allows the design of an Internet user interface. The application is built by selecting forms and controls, assigning properties and writing code.

CIS 137 Visual Basic Programming 3 Credits
Prerequisites: CIS 113. A basic understanding of the fundamental concepts involved when using a member of a Windows programming development language. The emphasis is on logical program design using a modular approach involving task oriented program functions. Visual Basic applications are built by selecting forms and controls, assigning properties, and writing code.

CIS 138 Advanced Simulation and Game Development 3 Credits
Prerequisites: CIS 112 and CIS 121. Includes in-depth discussions on creating 2D and 3D simulations and games using game libraries, timers, interrupt handlers, and multi-threading.

CIS 151 Integrated Business Software 3 Credits
Prerequisites: Demonstrated computer proficiency through appropriate assessment or successful completion of CIS 101. Presents knowledge of integrated microcomputer software concepts. Students design a complete business system utilizing all parts of an integrated microcomputer software package which can share the same data and manipulate it. Includes use of word processing, electronic spreadsheets, graphics, databases and command languages.

CIS 157 Web Site Development 3 Credits
Prerequisites: CIS 102. Creates a business or personal World Wide Web presence and uses Web technology. Creates a professional and successful World Wide Web site. Basic materials necessary to take the I-Net+ or CIW Certification Exam will be presented in this course.

CIS 203 Systems Analysis and Design 3 Credits
Prerequisites: Minimum of 21 CIS credits successfully completed. In this course the student will learn methodologies pertinent to the assessment, design and implementation of business computer information systems.

CIS 205 Database Design 3 Credits
Prerequisites: CIS 125. Introduces program applications in a database environment with emphasis on loading, modifying, querying the database by means of a host language. Discusses data structures; indexed and direct file organizations; models of data, including hierarchical, network and relational; storage philosophies, data administration and analysis; design; and implementation.

CIS 206 Project Development with High-Level Tools 3 Credits
Prerequisites: Program Advisor Approval. Analyzes established and evolving methodologies for the development of business-oriented computer information systems. Develops competencies in techniques that apply modern software tools to generate applications directly, without requiring detailed and highly technical program writing efforts.

CIS 215 Field Study 3 Credits
Prerequisites: None. A field study class is comparable to on-the-job training activities directly related to the CIS program of study. This must be approved by the program chair and the student must be in his/her last semester. A student must have a GPA of 3.0 to apply for this study position.

CIS 218 Advanced COBOL Programming 3 Credits
Prerequisites: CIS 118. Continues topics introduced in CIS 104 with more logically complex business problems. Develops a higher level of COBOL proficiency as well as greater familiarity with debugging techniques. Uses the structured approach through class instruction and laboratory experience.

CIS 221 Advanced C/C++/C# Programming 3 Credits
Prerequisites: CIS 212. Continues those topics introduced in C Language Programming with emphasis on array processing, advanced debugging techniques, dynamic memory allocation, and classes. Introduces Windows programming in C++ using MFC. Provides the opportunity to apply skills in a laboratory environment. Students will be introduced to Object Oriented Design and Programming concepts using C++ language features. Differences between C++ and classical C programming will be addressed.

CIS 222 Advanced RPG Programming 3 Credits
Prerequisites: CIS 122. Offers advanced study in the use of RPG compiler language in solving business problems. Focuses on the file processing methods and a working knowledge of advanced features and techniques through laboratory experience.

CIS 225 Advanced Database Management Systems 3 Credits
Prerequisites: CIS 201 or CIS 207. Emphasizes the development of advanced applications in database management.

CIS 227 Topics in Information Management 3 Credits
Prerequisites: CIS 114. Discusses topics of current interest in information management. Includes examples from production, operations, accounting, finance, marketing, sales and human resources. Focuses on

special interest projects. Utilizes field trips, guest speakers, audio-visual activities and seminars.

CIS 230 Seminar II 2 Credits
Prerequisites: Program Advisor Approval. Discusses topics of current interest in computerized information management with emphasis on applications of information management skills during lab time. Identifies and offers various seminar topics each term under this course number.

CIS 236 Advanced Java Programming 3 Credits
Prerequisites: CIS 136. Continues those topics introduced in CIS 136 with emphasis on arrays, graphics, inheritance, the Abstract Windows Toolkit (AWT), using layout managers, and other various Java tools and concepts. Provides the opportunity to apply skills in a laboratory environment.

CIS 237 Advanced Visual Basic Programming 3 Credits
Prerequisites: CIS 137. Continues those topics introduced in CIS 232. The emphasis is on data file design, data handling, database access, ActiveX, menus, variable arrays, and Visual Basic. Students will use advanced features to increase their level of proficiency in developing Visual Basic applications.

CIS 238 Advanced Simulation and Game Development 3 Credits
Prerequisites: CIS 112 and CIS 121. Includes in-depth discussions on creating 2D and 3D simulations and games using game libraries, timers, interrupt handlers, and multi-threading.

CIS 253 Graphic Image Lab 3 Credits
Prerequisites: CIS 102. A fundamental course that introduces students to computer design graphic software. The focus of the course is on understanding basic computer graphics terminology, the mastering of fundamental photo editing and basic design skills and development of efficient working styles.

CIS 257 Advanced Web Site Development 3 Credits
Prerequisites: CIS 157. Provides a comprehensive introduction to web programming, with little or no prior programming experience required. The student will continue with HTML and move progressively to more complex programming languages. It emphasizes a hands-on approach, and contains clear instructions for carefully chosen visual examples from a wide variety of topics. This class is designed to encourage students to find ways to capture their interests in creative web pages. This class provides most of the basics included in the CIW Site Designer Exam.

CIS 259 Web Administration 3 Credits
Prerequisites: CIS 157, CIT 121, CIT 201. Gives the basics covered in the CIW Server Administrator Certification Exam. Students will learn to configure and manage corporate Internet and intranet infrastructure.

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monitor and tune Web, FTP, news and mail servers and configure and deploy e-business solutions servers for midsize to large businesses.

CIS 279 Capstone Course 1 Credit
Prerequisites: Program Advisor Approval. Prepares the student for entry into the Information world. Reviews procedures for interviewing, team participation, and ethical and productive job performance. Provides for taking program outcomes assessments.

CIS 280 Co-op/Internship 1-6 Credits
Prerequisites: Program Advisor Approval. Provides students with the opportunity to work at a job site that is specifically related to their career objectives. Provides on-the-job experience while earning credit toward an associate degree. Fourth semester standing and a cumulative GPA of 2.0 or better is recommended for Internship students.

CIT 105 Operating Systems 3 Credits
Prerequisites: Demonstrated computer proficiency through appropriate assessment or successful completion of CIS 101. Studies of computer operating systems, purposes, structure and various functions. Provides general understanding of how comprehensive sets of language translators and service programs, operating under supervisory coordination of an integrated control program, form the total operating systems of a computer.

CIT 106 Microcomputer Operating Systems 3 Credits
Prerequisites: Demonstrated computer proficiency through appropriate assessment or successful completion of CIS 101. Introduces the organization, structure, and functions of an operating system for a microcomputer. Presents the student with operating system concepts such as commands, error messages, interrupts, function calls, device drivers, structure, files and organization. Incorporates concepts into practical applications.

CIT 109 UNIX Operating Systems 3 Credits
Prerequisites: CIT 106. Studies the UNIX operating System and its use as a time-sharing operating system. Includes basic UNIX commands, use of the visual editor, the UNIX directory structure and file management with SHELL commands. Offers opportunities to apply skills and knowledge in a laboratory environment.

CIT 110 Hardware and Software Troubleshooting 3 Credits
Prerequisites: CIT 106. Presents an in-depth analysis of the components of a computer system and their relationship to each other. Includes concepts of parallel and serial connectivity, installation and maintenance of system, peripheral devices, interface cards, and device drivers. The student will analyze realistic hardware/software problems encountered in the workplace and learn techniques and procedures to implement solutions.

CIT 121 Network Fundamentals 3 Credits
Prerequisites: CIT 106. A study of local area networks, their topologies and their functions and provides a general understanding of the basic LAN protocols. Topics covered include: fundamental concepts and terminology, the IEEE/ISO Logical Link Control standard, construction of a LAN, and LAN data links for internet works.

CIT 125 Windows Client Operating System 3 Credits
Prerequisites: CIT 120 or CIT 121. Provides instruction to demonstrate the ability to implement, administer, and troubleshoot information systems that incorporate Microsoft Windows. This course is designed to follow a preparation path towards the appropriate Microsoft certification series.

CIT 130 CISCO 1: Networking Basics 4 Credits
Prerequisites: Program Advisor Approval. The first of four courses leading to the Cisco Certified Network Associate (CCNA) certification. CCNA 1 introduces Network Academy Program students to the networking field. The course focuses on network terminology and protocols, local-area networks (LANs), wide-area networks (WANs), Open Systems Interconnection (OSI) models, cabling, cabling tools, routers, router programming, Ethernet, Internet Protocol (IP), and network standards.

CIT 131 CISCO 2: Routers and Routing Basics 4 Credits
Prerequisites: CIT 130. The second of four CCNA courses leading to the Cisco Certified Network Associate (CCNA) certification. CCNA 2 focuses on initial router configuration, Cisco IOS Software management, routing protocol configuration, TCP/IP, and access control lists (ACLs). Students will develop skills on how to configure a router, manage Cisco IOS Software, configure routing protocol on routers, and set the access lists to control the access to routers.

CIT 135 Novell Administration I 3 Credits
Prerequisites: CIT 121. Introduces the organization, structure, functions, and administration of a network operating system. This course is designed to train the student in administration of a local area network. Presents network operating system concepts such as file and shared printing, data protection, application installation, and electronic messaging. Concepts will be incorporated into practical applications.

CIT 136 Novell Advanced Administration 3 Credits
Prerequisites: CIT 135. Provides students with the knowledge and skills needed to design, configure, and administer a complex network. The course is designed to provide students with an advanced skill set.

CIT 170 Seminar I 1 Credit
Prerequisites: Program Advisor Approval. Discusses topics of current interest in computerized information management with emphasis on applications of information management skills during lab time. Identifies and offers various seminar topics each term under this course number.

CIT 201 Advanced Operating Systems: LINUX 3 Credits
Prerequisites: CIT 106. Studies advanced topics in operating systems as they apply to networking applications. Provides data relating to the different types of operating systems including workstation and server. This course will provide the necessary information in preparation for the CompTia Linux+ Certification Exam.

CIT 202 Data Communications 3 Credits
Prerequisites: CIS 102. Introduces the evolution of telecommunications and its affect on data communication systems. Topics covered will include the basic components of a communications system, a study of electrical signals used to represent data, the importance of error control when transmitting information, and the functions of network systems and their role in the communication of information. Students will also have an opportunity to explore data communications topics through research.

CIT 210 PC Technology Essentials 3 credits
Prerequisites: CIT 106. Includes identification of basic terms, concepts and functions of system modules, and basic procedures for adding and removing field replaceable units. Reviews of portable system components, identification of system resources, and other detailed information concerning PC architecture, hardware and standards. Includes identification of basic terms, concepts and function of operating systems in microcomputers and basic procedures for installation, upgrade and utilization. Reviews of basic concepts and procedures for creating, viewing, and managing files, using utility programs and understanding normal operation and symptoms relating to common problems.

CIT 211 IT Technician 3 credits
Prerequisites: CIT 210. Includes the understanding of more advanced PC terminology, concepts, functions of system modules, and more complex procedures for troubleshooting issues regarding PCs. Includes complete analysis of portable system components, an in-depth study of system resources, and other more detailed information concerning PC architecture, hardware, software, and standards. Includes a more sophisticated study of advanced terminology, concepts and functions of systems software in microcomputers and basic procedures for installation, upgrade and utilization. Reviews of more complex concepts and procedures for the administration of files using utility programs and understanding normal operation and symptoms relating to common troubleshooting issues with systems software.

CIT 220 Network Server Technologies 3 Credits
Prerequisites: CIT 120 or CIT 121. A study of network servers, particularly the hardware and software necessary to efficiently maintain a modern network. This course focuses on installation, configuration, administration, and troubleshooting of network servers. In addition it deals with site preparation, performance monitoring, and disaster recovery. The course provides support and guidance for preparation of the student to take the Server+ certification exam, a COMPTIA vendor

neutral test which can apply to Microsoft's MCSA, or stand on its own merit. This course contains elements above basic hardware fundamentals of a standard PC and so the certification is considered more advanced than the A+. In addition this course deals with Industry Standard Server Architecture (ISSA) issues, such as RAID, SCSI, multiple CPUs, SANs and other networking server issues.

CIT 225 Windows Network Operating Systems   3 Credits
Prerequisites: CIST 120 or CIT 121. Provides instruction to demonstrate the ability to implement, administer, and troubleshoot information systems that incorporate Microsoft Windows Server. This course is designed to follow a preparation path towards the appropriate Microsoft certification series.

CIT 226 Implementing and Administering a Windows Network Infrastructure   3 Credits
Prerequisites: CIT 125 or CIT 225. Provides instruction to demonstrate the ability to install, manage, monitor, configure, and troubleshoot DNS, DHCP, Remote Access, Network Protocols, IP Routing, and WINS in a Windows network infrastructure. In addition, this course builds the skills required to manage, monitor, and troubleshoot Network Address Translation and Certificate Services. This course is designed to follow a preparation path towards the appropriate Microsoft certification series.

CIT 227 Managing a Windows Network   3 Credits
Prerequisites: CIT 125 or CIT 225. Provides instruction to demonstrate the ability to administer, support, and troubleshoot information systems that incorporate Microsoft Windows. This course is designed to follow a preparation path towards the appropriate Microsoft certification series.

CIT 228 Administering Windows Directory Services   3 Credits
Prerequisites: CIT 225. Provides instruction to demonstrate the ability to install, configure, and troubleshoot the Windows Active Directory™ components, DNS for Active Directory, and Active Directory security solutions. In addition, this test requires the skills required to manage, monitor, and optimize the desktop environment by using Group Policy. This course is designed to follow a preparation path towards the Microsoft exam 70-217: Implementing and Administering a Microsoft Windows 2000 Directory Services Infrastructure.

CIT 230 CISCO 3: Switching Basics and Intermediate Routing   4 Credits
Prerequisites: CIT 131. The third of four courses leading to the Cisco Certified Network Associate (CCNA) certification. The course focuses on the following advanced IP addressing techniques: Variable Length Subnet Masking (VLSM), intermediate routing protocols such as RIP v2, single-area OSPF, and EIGRP, command-line interface configuration of switches, Ethernet switching, Virtual LANs (VLANs), Spanning Tree Protocol (STP), VLAN Trunking Protocol.

CIT 231 CISCO 4: WAN Technologies   4 Credits
Prerequisites: CIT 230. The last of four courses leading to the Cisco Certified Network Associate (CCNA) certification. The course focuses on Advanced IP addressing techniques, Network Address Translation (NAT), Port Address Translation (PAT), Dynamic Host Configuration Protocol (DHCP), WAN technology and terminology, PPP, ISDN, DDR, Frame Relay, network management and introduction to optical networking. In addition, the student will prepare for taking the CCNA Exam.

CIT 235 Networking Technology Concepts   3 Credits
Prerequisites: CIT 121. Provides students with an excellent foundation upon which to build their network training. The course covers the basics of computer networking, including terms and concepts. Networking technology—how it works, and why it works – is made clear in this course, where concepts like contemporary network services, transmission media, and protocols are explained. Students learn how protocols are used in networking implementations from many vendors, especially those most common in today's LANs and WANs.

CIT 236 Novell Hardware Service and Support   3 Credits
Prerequisites: CIT 135. Focuses on the prevention, diagnosis, and resolution of hardware-related problems encountered when working with NetWare. While the course assumes the use of NetWare, the skills learned will have a great deal of practical value to network administrators as they optimize and maintain systems while using many other Novell products. The course explores a number of research tools that will assist the network administrator in acquiring the information needed to solve "real-world" problems. It includes extensive hands-on exercises, which make up approximately 60% of all class time. The course materials are designed to provide a continuing reference that will be useful back at the student's worksite.

CIT 237 Novell Administration III   3 Credits
Prerequisites: CIT 135. How to design and implement Novell eDirectory trees and related components in any type of organization for different types of organizational goals using different types of network operating systems.

CIT 251 Introduction to Systems Security   3 Credits
Prerequisites: CIT 106, CIT 121 and CIT 225. Provides a fundamental understanding of network security principles and implementation. The student will learn the technologies used and principles involved in creating a secure computer networking environment including authentication, the types of attacks and malicious code that may be used against a network, the threats and countermeasures for e-mail, web applications, remote access, and file and print services.

CIT 252 Routers and Firewalls   3 Credits
Prerequisites: CIT 251. Provides a basic understanding of the fundamental concepts involved in firewalls, intrusion detection and VPN's.

This course prepares students to take the Check Point certification test 156-210.4 (Check Point Certified Security Administrator NG, Management I).

CIT 253 Microsoft Network Security   3 Credits
Prerequisites: CIT 125, CIT 225, and CIT 227. This course teaches the fundamentals of implementing and administering security on Windows Server 2003 networks. This course will provide instruction to demonstrate the ability to implement, administer, and troubleshoot information systems that incorporate Microsoft Windows Server. This course is designed to follow a preparation path towards the Microsoft exam 70-298 Designing Security for a Microsoft Server 2003 Network

CIT 254 Linux/Networking Security   3 Credits
Prerequisites: CIT 201 or Program Advisor Approval. Introduces concepts of security for Linux servers for computer students to build a foundation of knowledge about server systems and server applications security.

CIT 270 Seminar II   2 Credits
Prerequisites: Program Advisor Approval. Discusses topics of current interest in computerized information management with emphasis on applications of information management skills during lab time. Identifies and offers various seminar topics each term under this course number.

CIT 271 Field Study   3 Credits
Prerequisites: None. A field study class is comparable to on-the-job training activities directly related to the CIS program of study. This must be approved by the program chair and the student must be in his/her last semester. A student must have a GPA of 3.0 to apply for this study position.

CIT 279 Capstone Course   1 Credit
Prerequisites: Program Advisor Approval. Prepares the student for entry into the Information world. Reviews procedures for interviewing, team participation, and ethical and productive job performance. Provides for taking program outcomes assessments.

CIT 280 Co-op/Internship   1-6 Credits
Prerequisites: Program Advisor Approval. Provides students with the opportunity to work at a job site that is specifically related to their career objectives. Provides on-the-job experience while earning credit toward an associate degree. Fourth semester standing and a cumulative GPA of 2.0 or better is recommended for Internship students.

COM 101 Fundamentals of Public Speaking   TransferIN 3 Credits
Prerequisites: Demonstrated competency through appropriate assessment or earning a grade of "C" or better in ENG 025 and ENG 032. Introduces fundamental concepts and skills for effective public speaking, including audience analysis, outlining, research, delivery,

critical listening and evaluation, presentational aids, and use of appropriate technology.

COM 102 Introduction to Interpersonal
Communication   3 Credits
Prerequisites: Demonstrated competency through appropriate assessment or earning a grade of "C" or better in ENG 025 and ENG 032. Focuses on the process of interpersonal communication as a dynamic and complex system of interactions. Provides theory, actual practice, and criticism for examining and changing human interactions in work, family, and social contexts. Includes topics such as perception, self-concept language, message encoding and decoding, feedback, listening skills, conflict management, and other elements affecting interpersonal communication.

COM 201 Introduction to Mass Communication 3 Credits
Prerequisites: Demonstrated competency through appropriate assessment or earning a grade of "C" or better in ENG 025 and ENG 032. A survey of the print and electronic media that compose the mass media industry. Included in the survey are the history, technology, utilization and influence of each of the mediums as well as their symbiotic relationship to each other.

COM 202 Small Group Communication   3 Credits
Prerequisites: Demonstrated competency through appropriate assessment or earning a grade of "C" or better in ENG 025 and ENG 032. An introduction to communication principles and practices that enable small groups, such as committees, conferences and public discussions, to function effectively as well as the practices which limit small group effectiveness. The course is pragmatic in approach, and the student will learn small group dynamics through participation.

COM 203 Oral Interpretation of Literature   3 Credits
Prerequisites: COM 101 and ENG 111. Designed to develop the student's ability to select, analyze, interpret and communicate various types of literature to diverse audiences and to enhance the student's appreciation of literature.

COM 204 Voice and Articulation   3 Credits
Prerequisites: COM 101. Designed to improve the student's vocal abilities by providing a body of knowledge about voice production and diction and enabling the student to use this knowledge for his/her self-improvement.

COM 211 Introduction to Public Relations   3 Credits
Prerequisites: ENG 111 and COM 101 or COM 102. The course provides an introduction to the concepts, principles, and practices of public relations, from the historical to the contemporary, including public relations philosophy and theory. The course will focus on topics such as the origins of public relations, the functions and practices of public relations from past to present, ethics and law, message strategies, and research methods pertaining to public relations.

CON 101 Introduction to Construction
Technology   3 Credits
Prerequisites: Program Chair Approval. Presents history of building construction to present-day applications emphasizing future trends and construction as a career. Provides practice in the operation, maintenance and safety of various tools including the builder's level and transit.

CON 102 Construction Materials   3 Credits
Prerequisites: None. Develops skills in identifying building materials commonly used in modern building construction. Provides experience in the application of locally accessible materials.

CON 106 Construction Blueprint Reading   3 Credits
Prerequisites: None. Provides instruction and practice in the use of working drawings and applications from the print to the work. Includes relationship of views and details, interpretation of dimension, transposing scale, tolerance, electrical symbols, sections, materials list, architectural plans, room schedules and plot plans.

CON 127 Electrical Basics   3 Credits
Prerequisites: Demonstrated competency through appropriate assessment or earning a grade of "C" or better in MAT 050. An introductory course covering both AC and DC circuits. Studies include electron theory, Ohm's Law, Watt's Law, Kirchoff's Law, series circuits, series-parallel circuits, electromagnetic induction, current, voltage, resistance, power, inductance, capacitance, and transformers. Stresses the use of electrical equipment, troubleshooting, installation of hardware, metering equipment, lights, switches, and safety procedures and practices.

CON 204 Estimating and Specifications   3 Credits
Prerequisites: CON 106. Involves the students with the estimating process for residential construction. Emphasizes reading blueprints and specifications, estimating labor costs, materials take-off and pricing.

CON 280 Co-op/Internship   1-6 Credits
Prerequisites: Program Advisor Approval. Gives students the opportunity to work at a job site that is specifically related to their career objectives. Provides on-the-job experience while earning credit toward an associate degree.

CRJ 101 Introduction to Criminal
Justice Systems   TransferIN 3 Credits
Prerequisites: Demonstrated competency through appropriate assessment or earning a grade of "C" or better in ENG 025 and ENG 032. An introductory and fundamental course that covers the purposes, functions, and history of the three primary parts of the criminal justice system: law enforcement, courts, and corrections. This course further explores the interrelationships and responsibilities of these three primary elements of the criminal justice system.

CRJ 103 Cultural Awareness   3 Credits
Prerequisites: Demonstrated competency through appropriate assessment or earning a grade of "C" or better in ENG 025 and ENG 032. Emphasizes the study of American criminal justice problems and systems in historical and cultural perspectives, as well as discussing social and public policy factors affecting crime. Multidisciplinary and multicultural perspectives are emphasized.

CRJ 105 Introduction to Criminology   3 Credits
Prerequisites: Demonstrated competency through appropriate assessment or earning a grade of "C" or better in ENG 025 and ENG 032. Critically examines the history and nature of the major theoretical perspectives in criminology, and the theories found within those perspectives. Analyzes the research support for such theories and perspectives, and the connections between theory and criminal justice system practice within all the major components of the criminal justice system. Demonstrates the application of specific theories to explain violent and non-violent criminal behavior on both the micro and macro levels of analysis.

CRJ 110 Introduction to Law Enforcement   3 Credits
Prerequisites: CRJ 101. Introduces fundamental law enforcement operations and organization. Includes the evolution of law enforcement at federal, state, and local levels.

CRJ 111 Introduction to Traffic Enforcement
and Investigation   3 Credits
Prerequisites: CRJ 101. Examines the role of law enforcement in traffic safety, traffic administration, traffic laws, accident investigation, police safety, and patrol practices.

CRJ 113 Criminal Investigation   3 Credits
Prerequisites: CRJ 101. A study of the elements and techniques of criminal investigations. Primary aspects include crime scene examination, collection of evidence and search for witnesses, developing and questioning suspects, and protecting the integrity of physical evidence found at the scene and while in transit to a forensic science laboratory. Procedures for the use and control of informants, inquiries keyed to basic leads, and other information-gathering activity and chain of custody procedures will also be reviewed.

CRJ 117 Introduction to Forensics   3 Credits
Prerequisites: Demonstrated competency through appropriate assessment or earning a grade of "C" or better in ENG 025 and ENG 032. Studies the organization and analysis of investigative evidence, basic considerations in preparing evidential documentation for presentation in court, collection and preservation of physical evidence, and elements of legal proof in submission of evidence.

CRJ 120 Introduction to Courts   3 Credits
Prerequisites: CRJ 101. Introduces topics related to the adjudication

process in criminal cases, including arraignments and preliminary hearings, suppression hearings, trials, sentencing, juvenile court, and probation and parole. Reviews the role of criminal justice personnel in court processes.

CRJ 130 Introduction to Corrections 3 credits
Prerequisites: CRJ 101. Examines the American correctional system; the study of administration of local, state, and federal correctional agencies. Includes the history and development of correctional policies and practices, criminal sentencing, jails, prisons, alternative sentencing, prisoner rights, rehabilitation, and community corrections including probation and parole. Current philosophies of corrections and the debates surrounding the roles and effectiveness of criminal sentences, institutional procedures, technological developments, and special populations are discussed.

CRJ 150 Juvenile Justice System 3 Credits
Prerequisites: CRJ 101. Examination of the philosophy and theory behind the juvenile justice system and its component parts or systems. Analysis of the police response to juvenile delinquency followed by the role of the prosecuting attorney, the juvenile court, juvenile correctional facilities, and community-based programs designed for juvenile offenders. The primary focus of attention will be on the level of integration of these systems into a coherent system of justice that effectively and equitably responds to juvenile crime. The level of cooperation and coordination existing between the various component parts of the juvenile justice system will be critiqued, and the effectiveness of the juvenile system as a whole will be evaluated. Special attention will be given to the role of the juvenile justice system within the context of social, political, and economic inequality.

CRJ 201 Ethics in Criminal Justice 3 credits
Prerequisites: CRJ 101. A discussion of ethical theories and their considerations in the administration of criminal justice as well as the application to contemporary institutions and problems.

CRJ 204 Interview and Interrogation 3 Credits
Prerequisites: CRJ 101. Introduces students to the art of interviewing and interrogation, and further introduces them to the individual personality of the witness and/or suspect, and the means in which to secure valid information, admissions, and confessions, obtained legally and ethically, that are corroborative in nature, and that can be used to solve crimes and be introduced as evidence in court proceedings.

CRJ 205 Procedural Criminal Law 3 Credits
Prerequisites: CRJ 101. Covers the theory and practice of procedural criminal law and introduces the student to the laws of arrest, search and seizure, probable cause, due process, confessions, suspect identification and the many types of surveillances, all the while emphasizing Indiana Criminal Law.

CRJ 210 Police and Community Relations 3 Credits
Prerequisites: CRJ 101. Introduces police-community relations, examines trends, practices, social and individual effects of police work. Emphasis on police line and support operations. Analysis of operations, enforcement policy, operations during civil disorders and disaster, as well as the role of the police officer in achieving and maintaining public support, human relations, and relationship with violators and complainants.

CRJ 215 Police Administration and Organization 3 Credits
Prerequisites: CRJ 101. Introduction to the basic principles of law enforcement administration and organizational structure, their function and activities, records, communication, public relations, personnel and training, policy formation, evaluation of personnel and complaint processing and planning. The student who successfully completes this course will have an understanding of traditional and contemporary management approaches and techniques.

CRJ 220 Criminal Evidence 3 Credits
Prerequisites: CRJ 101. Examines the rules of evidence as applied in criminal investigation and criminal court with a discussion of relevant issues and legal standards.

CRJ 222 Special Issues in Youth Services 3 Credits
Prerequisites: CRJ 123. Examines issues commonly experienced in the youth care field.

CRJ 230 Community-Based Corrections 3 Credits
Prerequisites: CRJ 101. Reviews programs for convicted offenders that are alternatives to incarceration, including diversion, house arrest, restitution, community service, and other topics. Reviews post-incarceration situations, probation and parole.

CRJ 231 Special Issues in Corrections 3 Credits
Prerequisites: CRJ 101. Investigates topics of special interest related to corrections with an emphasis on the classification and treatment of inmates. Topics may vary to reflect contemporary corrections issues.

CRJ 240 Criminal Law and Procedure 3 Credits
Prerequisites: LEG 101 or CRJ 101. A theoretical and practical survey of the statutory law of crimes, evidence, and criminal procedure in Indiana, including an examination of sample pleadings and motions. Topics include the elements of specific crimes, formal procedures from pre-trial to post-trial, actual courtroom strategies, and the practical concerns involved in both the prosecution and defense of criminal cases.

CRJ 246 Legal Issues in Corrections 3 Credits
Prerequisites: HMS 105 or CRJ 101. Examines the four historical stages of development of the American prison system, and the six major rationales for punishment associated with those stages. Identifies the criminological perspectives that inform the rationales for punishment,

and the correctional policy implications relative to each rationale. Analyzes the research support for each of the six rationales for punishment, and the policy implications associated with them. Connects relevant legal issues to the correctional policy implications relative to each rationale for punishment. Locates appellate court decisions relative to correctional policy within the context of contemporary social, economic, and political conditions and controversies. Identifies the specific rights of prisoners and the responsibilities of the state with respect to the conditions of confinement.

CRJ 250 Juvenile Law and Procedures 3 Credits
Prerequisites: CRJ 123. Examination of the philosophy and theory behind the juvenile justice system and how juvenile law reflects that philosophy. Examination of the development of juvenile law and procedures, early juvenile law, landmark Supreme Court cases in juvenile justice, issues in juvenile law, and juvenile adjudicatory proceedings.

CRJ 251 Special Issues in Youth Services 3 Credits
Prerequisites: CRJ 150. Examines issues commonly experienced in the youth care field.

CRJ 260 Research Methods in Criminal Justice 3 credits
Prerequisites: CRJ 101 and demonstrated competency through appropriate assessment or earning a grade of "C" or better in MAT 050. Familiarizes students with the basic concepts, techniques, and problems associated with conducting research in criminal justice. Provides students with the analytical and critical thinking skills required to understand empirical research. Students will also acquire the necessary tools to conceptualize and conduct a research project. Students will examine the advantages and limitations of decisions that are made in the process of conducting research. Problems specific to research in criminal justice will be explored.

CRJ 280 Internship 4 Credits
Prerequisites: Program Advisor Approval. Provides fieldwork experience in an approved social, educational, law enforcement, corrections or other criminal justice organization.

CST 101 Infection Control Procedures 4 Credits
Prerequisites: Demonstrated competency through appropriate assessment or earning a grade of "C" or better in ENG 025, ENG 032, and MAT 050. Provides the fundamentals of central processing, supply, and processing distribution. Designed to give instruction and practice in aseptic technique and infection control measures necessary for central service. This course includes an in-depth practice of numerous sterilization techniques. The student develops skills and becomes proficient in the functions of cleaning, decontaminating, processing, and sterilizing of reusable patient care supplies and equipment.

CST 102 Surgical Instrumentation 2 Credits
Prerequisites: CST 101. Prepares the student to identify surgical instru-

ments by category, type and use. Emphasis on quality assurance enables the student to inspect, assemble and prepare instrumentation for packaging.

CST 103 Fundamentals of Health Careers   3 Credits
Prerequisites: CST 101. Emphasizes the legal and ethical considerations of health care delivery. The student practices workplace safety measures including body mechanics, infection control and environmental safety. Employability skills to gain and keep employment are practiced.

CST 104 Clinical Applications I   3 Credits
Prerequisites: CST 102. Provides 100 of the 400 hours necessary for the student to take the IAHCSMM Technical Certification Exam. Emphasis is placed on the basics of patient care equipment and general cleaning and wrapping of instruments.

CST 105 Fundamentals of Central Service Technician Skills   4 Credits
Prerequisites: CST 104. Introduces the field of central service and the personnel within the department. The principles and importance of the flow of materials are determined. The student learns about environmental control factors affecting the central service department. The student will differentiate between equipment management systems and compare out-sourcing and insourcing. Various types of purchasing issues and inventory methods will be explored.

CST 106 Clinical Applications II   3 Credits
Prerequisites: CST 104. Provides 160 of the 400 hours necessary for the student to take the IAHCSMM Technical Certification Exam. Emphasis will be placed on the basics of linen folding, assembling instrument and procedure trays, and sterilization.

CST 107 Application of Central Service Technician Skills   3 Credits
Prerequisites: CST 104. Emphasizes the practice of high and low sterilization methods. Students differentiate among the various sterilization methods in theory and practice.

CST 108 Clinical Applications III   4 Credits
Prerequisites: CST 107. Provides 192 of the 400 hours necessary for the student to take the IAHCSMM Technical Certification Exam. Emphasis will be placed on clean and sterile storage, case carts, and distribution.

DEN 102 Dental Materials and Lab I   3 Credits
Prerequisites: Admission to the Dental Assistant program. The first in a series of two courses that reviews in-depth the properties of dental materials, proper modes of manipulation, necessary armamentarium used, and technical duties dental assistants can perform. Stresses clinical behavior of materials and biological factors of importance to dental assistant.

DEN 115 Preclinical Practice I   4 Credits
Prerequisites: Admission to the Dental Assistant program. The first in

a series of two courses that introduce in-depth qualification and legal/ethical requirements of the dental assistant. Surveys history and professional organizations. Emphasizes clinical environment and responsibilities, chairside assisting, equipment and instrument identification, tray setups, sterilization, characteristics of microorganisms and disease control.

DEN 116 Dental Emergencies/Pharmacology   2 Credits
Prerequisites: Admission to the Dental Assistant program. An in-depth course that surveys the most commonly utilized and required first aid measures for emergencies. Examines proper techniques and procedures as well as equipment, medications and positioning for care of the patient. Reviews anatomy/physiology and cardiopulmonary rescue as provided by the American Heart Association.

DEN 117 Dental Office Management   2 Credits
Prerequisites: Admission to the Dental Assistant program. Focus on the principles of administrative planning, bookkeeping, recall programs, banking, tax records, computer software, insurance, office practice and management as related to the dental office. Attention is given to techniques of appointment control, record keeping and credit and payment plans.

DEN 118 Dental Radiography   4 Credits
Prerequisites: DEN 115 and DEN 123. An in-depth course that focuses on the principles, benefits, effects, and control of X-ray production. Covers history, radiation sources, modern radiographic equipment and techniques, anatomical landmarks, dental films and processing. Emphasizes avoidance of errors while exposing and processing dental radiographs.

DEN 122 Clinical Practicum I   1 Credit
Prerequisites: DEN 102, DEN 115, DEN 116 and DEN 123. An in-depth course that focuses on the performance of chairside skills that are applied in a clinical office situation on live patients.

DEN 123 Dental Anatomy   2 Credits
Prerequisites: Admission to the Dental Assistant program. An in-depth course that focuses on oral, head and neck anatomy, basic embryology, histology, tooth morphology and charting dental surfaces related to the dental field. Includes dental anomalies, pathological conditions and terminology relevant to effective communication.

DEN 124 Preventive Dentistry/Diet and Nutrition   2 Credits
Prerequisites: DEN 115 and DEN 123. An in-depth course that emphasizes the importance of preventive dentistry and the effects of diet and nutrition on dental health techniques of assisting patients in the maintenance of good oral hygiene.

DEN 125 Preclinical Practice II   3 Credits
Prerequisites: DEN 102, DEN 115, DEN 116 and DEN 123. The second in

a series of two in-depth courses that continues Preclinical Practice I. Anesthesia is presented. The following dental specialties are presented: Oral and Maxillofacial Surgery, Periodontics, Endodontics, Pediatric Dentistry, Orthodontics, Prosthodontics, and Dental Public Health.

DEN 129 Dental Materials and Lab II   3 Credits
Prerequisites: DEN 102. The second in a series of two in-depth courses that reviews the properties of dental materials, proper modes of manipulation, necessary armamentarium used, and technical duties dental assistants can perform. Stresses clinical behavior of materials and biological factors of importance to dental assistant.

DEN 130 Clinical Practicum II   5 Credits
Prerequisites: All DEN Courses. An in-depth clinical learning experience that provides increased practical chairside dental assisting experience to be gained from private dental practices in general and specialty areas of dentistry. Opportunity for increased skill development in clinical support and business office procedures also provided. Weekly seminars are included as an integral part of the learning experience. Simulated exams are administered to review for the national certification exam.

DEN 131 Basic Integrated Science   2 Credits
Prerequisites: Admission to the Dental Assistant program. An introductory course that examines human body as integrated unit; includes anatomy, physiology and medical terminology.

DSN 100 Introduction to Design Technology   3 Credits
Prerequisites: None. Provides the beginning design technology student with the basic tools necessary for success in their chosen program.

DSN 102 Technical Graphics   3 Credits
Prerequisites: None. Provides students with a basic understanding of the detailing skills commonly used by a drafting technician. Areas of study include: lettering, sketching, proper use of equipment, geometric constructions with emphasis on orthographic (multi-view) drawings that are dimensioned and noted to ANSI standards.

DSN 103 CAD Fundamentals   3 Credits
Prerequisites: None. Provides students with a basic understanding of the features and considerations associated with the operation of a computer-aided design (CAD) system. Students will gain valuable hands-on experience using CAD software. They will be expected to complete several projects (increasing in difficulty) relating to command topics covered on a weekly basis.

DSN 104 Mechanical Graphics   3 Credits
Prerequisites: DSN 103. Covers working drawings both in detailing and assembly. Presents fastening devices, thread symbols and nomenclature, surface texture symbols, classes of fits, and the use of parts lists, title blocks and revision blocks.

DSN 105 Architectural Design I   3 Credits
Prerequisites: DSN 103. Presents a history and survey of architecture

and focuses on creative design of buildings in a studio environment. Covers problems of site analysis, facilities programming, space planning, conceptual design, proper use of materials, selection of structure and construction techniques. Develops presentation drawings, and requires oral presentations and critiques. Generation of form and space is addressed through basic architectural theory, related architectural styles, design strategies, and a visual representation of the student's design process.

DSN 106 Descriptive Geometry 3 Credits
Prerequisites: TEC 102. Introduces fundamental principles in developing graphical solutions to engineering problems. Topics covered in this course include true length, piercing points on a plane, line intersections, true shapes, revolutions, and developments using successive auxiliary views.

DSN 107 History of Architecture 3 Credits
Prerequisites: Demonstrated competency through appropriate assessment or earning a grade of "C" or better in ENG 025, ENG 032 and MAT 044. Studies the ingenuity and imagination of the human spirit in shaping the built environment related to cultural, political, social, and technological history. Presents a survey of architectural styles, architects, design philosophies, and building materials used by time, period, country, region and city. Requires oral presentations, essays, term papers, research and small projects. Field trips to historical architectural sites are a part of this course.

DSN 108 Residential Design 3 Credits
Prerequisites: DSN 103. Covers residential design and drafting. Includes interior space planning, structural design and development of working drawings. Provides opportunity for students to design a residence using accepted building standards.

DSN 109 Construction Materials and
Specifications 3 Credits
Prerequisites: None. Introduces various construction materials, composition and application. Studies specifications of materials, construction contracts, and applications required in the building industry.

DSN 110 Architectural Rendering 3 Credits
Prerequisites: TEC 102. Presents a survey and history of pictorial drawings. Studies light and color, rendering media, and application of different architectural rendering techniques and media through a series of exercises.

DSN 113 Intermediate CAD 3 Credits
Prerequisites: DSN 103. Improves the student's CAD ability by presenting intermediate CAD commands, which will lead to the creation of advanced prototype drawings, graphic manipulation of symbol libraries, the utilization of advanced dimensioning techniques, and application of data sharing techniques. Detailed plotting instruction

will also be covered. Students will be expected to complete several projects relating to command topics covered on a weekly basis.

DSN 130 Fundamentals of Computer Graphics 3 Credits
Prerequisites: None. Introduces students to raster & vector based applications as they relate to the CAD field. Demonstrates the knowledge of devices used in the creation and for the output of drawings. Understand the importance of graphics in the design process and how it impacts the design field. These skills are developed by producing work from related applications.

DSN 131 Industrial Sketching 3 Credits
Prerequisites: None. Combines fundamental computer graphics concepts of design, visualization, communication and display within an industrial sketching metaphor. Exercises and projects in graphic theory, problem solving and sketching skill development provide students with activities that focus on further development within CADD, vector imaging, raster imaging and other related formats. A variety of sketching techniques are used to gather critical information and transform graphical data into effective design communication instruments. Produces samples for student portfolios.

DSN 132 Raster Imagine Fundamentals 3 Credits
Prerequisites: None. Provides intermediate instruction in illustration techniques using computer software designed for creating illustrations, technical, drawing, logos, packaging, maps, charts, and graphs utilizing CADD data. Emphasis is on preparing effective, creative illustrations for various media applications in an efficient, productive manner. Produces samples for student portfolios.

DSN 133 Vector Imaging Fundamentals 3 Credits
Prerequisites: DSN 103. Provides fundamental instruction in working with vector images (CAD drawings) while applying elements and principles of design to illustrations for various output. Combines color theory, creativity, type and layout design for renderings.

DSN 201 Schematics 3 Credits
Prerequisites: TEC 102 and DSN 103. Includes the layout of the various types of schematic drawings. Students will prepare finished drawings for the manufacture or installation of plumbing, heating, electrical, electronic and fluid power drawings.

DSN 202 CAD Customization and Programming 3 Credits
Prerequisites: DSN 103. Covers customizing of a CAD system. Covers methods used to make CAD system more efficient for the individual user.

DSN 204 Architectural Design II 3 Credits
Prerequisites: DSN 105. Presents advanced computer-aided design topics in architectural design. Utilizes current (UBC) information for project design. Includes all necessary drawings needed for the construction process.

DSN 206 Mechanical and Electrical Equipment 3 Credits
Prerequisites: DSN 103 and 100-level Mathematics course. Focuses on mechanical and electrical requirements for buildings. Studies electrical load calculations, wire sizing and circuits, plumbing requirements, fixture units and pipe sizing. Includes heating systems, duct layout and sizing.

DSN 207 Die Design 3 Credits
Prerequisites: DSN 104 and TEC 101. Studies the detailing and design of blanking, piercing, and forming dies. Covers material reaction to shear, cutting clearances and net gauging.

DSN 208 Structural Design and Detailing 3 Credits
Prerequisites: DSN 109, DSN 103 and 100-level Mathematics course. Focuses on the design and detailing of commercial structural members, their connections, materials and methods of construction. Concentrates on traditional materials such as reinforced concrete, masonry, steel, and timber. Develops understanding of element behavior, its significance to detailing, and establishes the ability to prepare working drawings for structural projects.

DSN 209 Estimating 3 Credits
Prerequisites: DSN 109. This course provides students with an understanding of building an estimate of the probable construction costs for any given project. To prepare an estimate of quantities, the student estimator must become familiar with working drawings, specifications, and various bid documents. While computerized estimating software is commonplace in industry, it is also essential that the student is able to apply the math theory behind quantification.

DSN 210 Surveying 3 Credits
Prerequisites: MAT 121 or MAT 131 or MAT 134. Provides students with a basic understanding of surveying equipment, procedures for performing measurements, turning angles, determining grades and other field applications. Surveying techniques and computations using the level, chain, and transit in calculating areas, lines, and grades will be covered in this course.

DSN 211 Commercial Structures I 3 Credits
Prerequisites: DSN 204 and 100-level Mathematics course. Presents the design and drawing of commercial structures utilizing the Uniform Building Code (UBC). Focus is directed to structural systems and details of commercial structures including wood, steel, and concrete. Provides architecture students with essential skills to perform structural analysis of buildings.

DSN 212 Commercial Structures II 3 Credits
Prerequisites: DSN 211. Focuses on the planning and drawing of commercial structures. Uses working drawings for pre-engineered and concrete/steel structures. Applies lessons learned from DCT 211 to new structure(s).

DSN 213 CAD Mapping 3 Credits
Prerequisites: DSN 103. Covers the concepts of map-making with CAD software and typical media found in the industry. Civil application of mapping procedures including profiles, topography, and site plans will also be discussed.

DSN 214 Kinematics of Machinery 3 Credits
Prerequisites: DSN 104 and MAT 121 or MAT 131 or MAT 134. This non-calculus based course studies the application of kinematics theories to real world machinery. Static and motion applications will be studied.

DSN 215 Electronic Schematics 3 Credits
Prerequisites: TEC 102 and DSN 103. Introduces students to electronic schematics, standardized symbols, and acceptable practices in creating various electrical and electronic drawings. Emphasizes the creation and manipulation of basic symbols, connection diagrams, block and logic diagrams, including the use of figure parts and data extraction. Introduction to analog and digital multimeters and other electronic measuring instruments.

DSN 216 Jig and Fixture Design 3 Credits
Prerequisites: DSN 104 and TEC 101. The processes of drafting and design as applied to tooling. Emphasizes tooling, locators, supports, holding devices, clearances and design as it pertains to jig and fixtures.

DSN 217 Design Process and Applications 3 Credits
Prerequisites: DSN 104. Provides the student an opportunity to apply all previously acquired knowledge in the design of a new or existing consumer product. Students will study the design processes with consideration given to the function, aesthetics, cost economics and marketability of the product. A research paper and product illustration is required in this course.

DSN 220 Advanced CAD 3 Credits
Prerequisites: TEC 102 and DSN 103. Focuses on advanced CAD features, including fundamentals of three-dimensional modeling for design. Includes overview of modeling, graphical manipulation, part structuring, coordinate system, and developing strategy of modeling. Advanced CAD will enable the student to make the transition from 2D drafting to 3D modeling.

DSN 221 Statics 3 Credits
Prerequisites: MAT 121 or MAT 131 or MAT 134. Studies applied mechanics dealing with bodies at rest without the use of calculus. Covers units, vectors, forces, equilibrium, moments and couples, planar force systems, distributed forces, analysis of structures, and friction.

DSN 222 Strength of Materials 3 Credits
Prerequisites: DSN 221. Studies internal stresses and physical deformations caused by externally applied loads to structural members. Covers stress and strain, shear stress, properties of areas, shearing force and

bending moment, deformation of beams, columns and combined stresses. Studies various materials' physical and mechanical properties.

DSN 225 Portfolio Preparation 3 Credits
Prerequisites: DSN 220. Focuses on the student's final portfolio for graduation and preparation for the job interview. Finalizes design project work demonstrating the required knowledge and skills for degree achievements along with resume and cover letter preparation. A presentation for the portfolio is required in this class. Every student must submit a copy of the final portfolio for departmental archives upon graduation.

DSN 227 Geometric Dimensioning and Tolerancing 3 Credits
Prerequisites: TEC 102 or MIT 102. Introduces the fundamental principles of geometric dimensioning and tolerancing according to the latest ANSI standards. Students will apply geometric dimensioning and tolerancing symbols along with tolerances of form, profile, orientation, run-out, and location to mechanical problems.

DSN 228 Civil I 3 Credits
Prerequisites: DSN 103 and 100-level Mathematics course. Presents an overview of the basics of infrastructure related design topics, including the study of roadway and drainage systems. Emphasizes the preparation of drawings pertaining to infrastructure design and site development. Numerical calculations related to the design topics will be discussed.

DSN 229 Civil II 3 Credits
Prerequisites: DSN 228. Presents advanced infrastructure related design topics, including highway structures, pavement types and geotechnical considerations. Emphasizes the preparation of drawings pertaining to various types of bridges. Drawing presentation of geotechnical site studies and pavement designs is also reviewed. Numerical calculations related to the design topics will be explained.

DSN 230 Computer Modeling and Animation 3 Credits
Prerequisites: DSN 103. Contains an historical overview of the development of computer-generated imagery, including CADD, computer animation, computer art and visualization. This course will cover various aspects of 3-Dimensional modeling, lighting, and camera placement, as well as compositional and design aspects for presentation. Computer animation techniques such as keyframing, inverse kinematics, and simulation will be introduced. The course also includes an overview of storyboarding, scene composition, and lighting.

DSN 250 Vector Mechanics-Statics 3 Credits
Prerequisites: MAT 218. Includes resolution and composition of forces, moments, principles of equilibrium and application to trusses and jointed frames, friction, center of gravity and second moments of areas. Uses vector analysis throughout.

DSN 251 Dynamics 3 Credits
Prerequisites: DSN 250. Covers rectilinear and curvilinear motions, force, mass and acceleration, projectiles, pendulums, inertia forces in machines, work and energy, impulse and momentum and impact.

DSN 252 Mechanics of Solids 4 Credits
Prerequisites: DSN 250. Covers general principles of stress and strain, including elastic and inelastic behavior, shear, torsion, stresses in beams and deflection of beams and columns. The lab portion will be used to determine various materials' physical and mechanical properties.

DSN 280 Co-Op/Internship 3 Credits
Prerequisites: Program Advisor Approval. Gives students the opportunity to work at a job site that is specifically related to their career objectives. Provides on-the-job experience while earning credit towards an associate's degree.

ECE 100 Introduction to Early Childhood Education 3 Credits
Prerequisites: None. Entry level course for Early Care and Education teachers. Provides an overview of the history, theory, and foundations of early childhood education as well as exposure to types of programs, curricula and services available to young children. Opportunities to explore a variety of opportunities in the field through lecture, activities, and classroom observations.

ECE 101 Health, Safety, and Nutrition 3 Credits
Prerequisites: None. Examines basic principles of child development, Developmentally Appropriate Practices (DAP), importance of family, licensing, and elements of quality care of young children with an emphasis on the learning environment related to health, safety, and nutrition. Entry-level course for early care and education teachers.

ECE 103 Curriculum in Early Childhood Classroom 3 Credits
Prerequisites: None. Entry level course for Early Care and Education teachers. Examines developmentally appropriate environments and activities in various childcare settings. Explores the varying developmental levels and cultural backgrounds of children.

ECE 105 CDA Process 3 Credits
Prerequisites: Program Chair Approval. Prepares the student for the verification process for the Child Development Associate (CDA) credential. Students are provided opportunities for practical experience through supervised participation in early care and education settings.

ECE 107 Introduction to Teaching 3 Credits
Prerequisites: None. An introductory course which explores philosophical and historical foundations of the American educational system. Examines the ecological factors that impact the classroom. Defines the characteristics of the competent teacher. Provides

opportunities for observations, hands on learning experiences and volunteer service.

ECE 110 Infant/Toddler Growth and
Development   **3 Credits**
Prerequisites: Demonstrated competency through appropriate assessment or earning a grade of "C" or better in ENG 025 and ENG 032. Studies the physical, social, emotional, cognitive, and language development of infants and toddlers from conception through age three. Examines the crucial role of brain development and ecological systems during the first three years. Responsive care by adults is recognized as crucial to the development of the infants and toddlers. Quality child care is defined.

ECE 111 Environments for Infants and Toddlers   3 Credits
Prerequisites: None. Examines physical, human and time environmental factors essential for providing quality early care and education. Discovers and assesses the various settings for infants and toddlers from the perspectives of quality and family issues. Adult-child relationships and adult-adult relationships within the environments are explored. Community resources and child advocacy efforts are examined.

ECE 115 Indiana Youth Development (IYD)
Process   **3 Credits**
Prerequisites: Program Chair approval. Prepares the student for the verification process for the Indiana Youth Development Credential (IYD). Students are provided opportunities for practical experience through supervised participation in programs for school age and youth educational settings.

ECE 120 Child Growth and Development   3 Credits
Prerequisites: Demonstrated competency through appropriate assessment or earning a grade of "C" or better in ENG 025 and ENG 032. Studies the physical, social, emotional, cognitive, and moral development of children from conception to age twelve. Theories of child development, biological and environmental foundations, prenatal development, the birth process, and the newborn baby are discussed. Influences of family, community, media, and culture are considered.

ECE 130 Developmentally Appropriate Guidance
in a Cultural Context   **3 Credits**
Prerequisites: Demonstrated competency through appropriate assessment or earning a grade of "C" or better in ENG 025 and ENG 032. Analyzes developmentally appropriate guidance, theory and implementation for various early care and education settings. Provide a basic understanding of the anti-bias/multicultural emphasis in the field of early childhood.

ECE 200 Family-Teacher Partnerships   3 Credits
Prerequisites: Demonstrated competency through appropriate assessment or earning a grade of "C" or better in ENG 025 and ENG 032. Examines the family/teacher partnership, recognizing the need to work as a team to enhance the child's development. Promotes awareness of the family as the child's first teacher, foundation, and framework for culture, language, attitudes, and values. Provides the structure for creating practices that establish active family participation. Explores issues and resources for families.

ECE 201 Skills for Parenting   3 Credits
Prerequisites: Demonstrated competency through appropriate assessment or earning a grade of "C" or better in ENG 025 and ENG 032. Focuses on skill development in parents that provides knowledge regarding healthy development in young children, building self-esteem, communicating with young children, setting appropriate boundaries and nurturing emotional and social development in children. Examines models of parent education, parenting styles, and the need for parent empowerment. Analyzes the effects of parent involvement in children's educational experiences.

ECE 204 Families in Transition   3 Credits
Prerequisites: ENG 111 and SOC 111. Examines the stages of the family life cycle and interpersonal relationships among family members. Recognizes the impact of context and culture on the family's ability to function.

ECE 205 Early Care Practicum   3 Credits
Prerequisites: Program Chair Approval. Provides opportunity for practical experience through observation and supervised participation in childcare settings. This practicum offers experiences with age's infant through school age and requires 144 hours of field experience in an approved early care setting.

ECE 210 Early Childhood Administration   3 Credits
Prerequisites: ECE 100, ECE 120, ENG 111 and demonstrated competency through appropriate assessment or earning a grade of "C" or better in MAT 050. Introduces principles of managing an early care and education program; emphasizes the role of the manager to include personnel and program administration and fiscal management. Explores client-community relations.

ECE 213 Infant and Toddler Programming   3 Credits
Prerequisites: ECE 110 or ECE 120. Studies the program planning and operation for quality infant and toddler care and education. The students examine the teacher's role in establishing positive and productive relationships with families. Exploration of essential skills and dispositions in managing an effective program are considered. The students will broaden their knowledge base of appropriate instructional strategies to enhance infant/toddler development. Students will develop activities to enhance the physical, social, emotional and cognitive development of the child, 0-36 months. Students will complete observations and field experiences with children of this age.

ECE 215 The Business of Child Care   3 credits
Prerequisites: ECE 100, ECE 101, ECE 103, ECE 105, demonstrated competency through appropriate assessment or earning a grade of "C" or better in ENG 024 and ENG 031. An introduction to the principles of child care management, emphasizing the role of the business manager including personnel and program administration and fiscal management. Explores the concept of starting your own child care business including determining the need, client-community relations and marketing strategies.

ECE 216 Curriculum Planning For Early
Childhood Administrators   **3 Credits**
Prerequisites: ENG 111, demonstrated competency through appropriate assessment or earning a grade of "C" or better in MAT 050 and 18 credit hours of ECE coursework. Overview of cognitive and creative curriculum from a developmentally appropriate perspective. Examines early childhood curriculum models with an emphasis on planning and evaluating curriculum to meet the comprehensive needs of the young child. Course places emphasis on staff and family involvement in curriculum planning, implementation, and assessment.

ECE 218 Leadership and Mentoring in
Early Childhood   **3 Credits**
Prerequisites: ENG 111, 9 credit hours of Early Childhood Education coursework and Program Chair Approval. A basic introduction to the concept of leadership. Includes theories of leadership and teamwork and provides an opportunity for students to present a workshop to Early Childhood professional and to establish a relationship with a protégé.

ECE 220 Adolescent Growth and Development   3 Credits
Prerequisites: Demonstrated competency through appropriate assessment or earning a grade of "C" or better in ENG 025 and ENG 032. Examines the physical, social, emotional, cognitive, and moral development of the child age eight through adolescence. Influences of family, school, peers, community, media, and cultures are discussed. Issues such as health, puberty, school issues, peers and youth culture, and personal, including substance abuse, eating disorders, pregnancy, depression, and suicide is considered.

ECE 223 School Age Programming   3 Credits
Prerequisites: None. Examines environments, materials, methods and teaching styles for providing creative experiences for the school age child. Offers appropriate experiences in music, movement, art and drama as well as methods to assist students in identification and pursuit of specific personal interest areas in a school age child care setting. Review theories of adolescent growth and development, establishment of partnerships with families and positive guidance techniques for school age children.

ECE 225 Infant Toddler Practicum   **3 Credits**
Prerequisites: Program Chair Approval. Provides opportunity for practical experiences through observation, assessment and supervised participation in an infant/toddler setting. Students develop, implement and assess appropriate environments and activities for children 6-36 weeks. Requires 144 hours of field experience.

ECE 230 The Exceptional Child   **3 Credits**
Prerequisites: ECE 120 and ENG 111. Provides an introduction to caring for each exceptional child. Includes theories and practices for producing optimal developmental growth. Develops teaching techniques and explores public policy including legislative mandates. Explores the types of special needs and provides methods for assistance.

ECE 233 Emerging Literacy   **3 Credits**
Prerequisites: ECE 103 and ENG 111. Provides for understanding of the development of children's language arts behaviors, concepts, and skills that precede and can develop into literacy, which includes reading and writing skills. Provides understanding and skills on how the acquisition of language for young children develops into optimum literacy growth through the materials and the environments that are provided for the young children. Students will explore and evaluate literature for young children. The course introduces technology materials and techniques, which are utilized in early childhood programs. In the course the students will research, examine and evaluate various screening and assessment tools related to literacy in the early childhood.

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ECE 235 Preschool Practicum   **3 Credits**
Prerequisites: Program Chair Approval. Provides opportunity for practical experience through observation and supervised participation in early care and education setting with children ages 3-5. Students will develop and implement developmentally appropriate environments and activities.

ECE 240 Introduction to Care in the Home   **3 credits**
Prerequisites: None. Examines environments, materials, methods and teaching styles appropriate to child care in the home. Offers appropriate experiences in all curricular areas as well as suggestions for designing and operating a program that serves all ages. Reviews theories of growth and development, establishment of partnerships with families and positive guidance techniques for infants and children from birth through age twelve. Reviews Indiana family child care licensing regulations.

ECE 243 Cognitive Curriculum   **3 Credits**
Prerequisites: ECE 103, ECE 120 and demonstrated competency through appropriate assessment or earning a grade of "C" or better in MAT 050. Review cognitive theories of development in relation to the domains of early learning. Analyze appropriate problem solving, math, science, and social studies curriculum in early childhood settings. Create and implement curriculum in the domains of early learning with appropriate child outcomes assessment. Reflect upon implementation of activities and assessment with children.

ECE 245 School Age Practicum   **3 Credits**
Prerequisites: Program Chair Approval. Provides opportunities for practical experience through observation and supervised participation and assessment in a school-age setting. Students will develop and implement appropriate environments and activities. Requires 144 hours of field experience.

ECE 255 Generalist Practicum   **3 Credits**
Prerequisites: Program Chair Approval. Provides opportunity for practical experience through observation and supervised participation and assessments in an early childhood setting. Students will develop and implement appropriate program plans and activities. Requires 144 hours of field experience.

ECE 260 Early Childhood Professional   **3 Credits**
Prerequisites: Program Chair Approval. Surveys and further examines early childhood philosophies, theories and theorist. Encourages students to form their own theories for learning, discipline, family involvement, and self-concept development. Guides students in the development of a professional graduation portfolio. This is a capstone course and requires program chair approval.

ECN 101 Economics Fundamentals   TransferIN 3 Credits
Prerequisites: Demonstrated competency through appropriate assessment or earning a grade of "C" or better in ENG 025, ENG 032 and MAT 050. Provides a survey of microeconomics, macroeconomics, international economics, comparative economic systems, historical development of economic thought, and their application to current economic problems. An introductory course intended primarily for students who need only one semester of economics.

ECN 201 Principles of Macroeconomics
TransferIN 3 Credits
Prerequisites: ENG 111 and demonstrated competency through appropriate assessment or earning a grade of "C" or better in MAT 050. A descriptive and analytical study of fundamental concepts of national economics. It includes an analysis of the determination and fluctuations in national income and employment, monetary and fiscal policy, and international trade and finance. Economic analysis of monetary and fiscal policies is stressed.

ECN 202 Principles of Microeconomics
TransferIN 3 Credits
Prerequisites: ENG 111 and demonstrated competency through appropriate assessment or earning a grade of "C" or better in MAT 050. A descriptive and analytical study of the market economy and how it allocates resources. Emphasis is placed on consumer behavior, market structure, pricing, and distribution and determination of wealth and income.

ECT 101 Introduction to Electronics
and Projects   **3 Credits**
Prerequisites: None. The material will concentrate on the physical world of electricity and electronics. Practical techniques for proper and safe use of basic hand and machine tools are introduced. Techniques for connecting various types of circuits are also covered. The process of fabricating printed circuit boards and introductory processes for using plastic and metal to fabricate custom parts are presented. Communication skills are utilized to report project progress and results.

ECT 111 Introduction to Circuits Analysis   **4 Credits**
Prerequisites: MAT 111. Voltage, current, resistance, Ohm's law, Kirchhoff's laws, resistance combinations, and Thevenin's, Norton's, and superposition theorems are studied. DC and AC circuits are studied and utilized with basic AC terminology described. The performance of ideal transformers, capacitors and inductors, and first order RLC circuits are investigated. Fundamental analog electronic circuits are utilized in the lecture and laboratory to enhance the understanding of basic laws and theorems.

ECT 112 Digital Fundamentals   **3 Credits**
Prerequisites: Demonstrated competency through appropriate assessment or earning a grade of "C" or better in MAT 050. Introduces basic gate and flip-fl op logic devices and their application in combinational and sequential digital circuits. Topics include decoders, displays, encoders, multiplexers, demultiplexers, registers, and counters. Logic circuit analysis, implementation of circuits using standard IC chips or programmable logic devices, circuit testing and troubleshooting are emphasized.

ECT 121 Electronics Circuits Analysis   **4 Credits**
Prerequisites: ECT 111. Capacitors, inductors, switching circuits, transformers, rectifiers, linear regulators, dependent sources, operational amplifiers, BJT and MOSFET based small signal amplifiers, waveform generation, and programmable analog devices are studied. Circuit fundamentals such as Kirchhoff's laws are utilized in analysis and design circuits. Computer simulation is used.

ECT 122 Digital Applications   **4 Credits**
Prerequisites: ECT 112. This course continues the study of combinational and sequential digital applications. The input and output characteristics of the various common logic families and the appropriate signal conditioning techniques for on/off power interfacing are discussed. Also stressed are standard logic function blocks, digital and analog signal interfacing techniques, and memory devices.

ECT 128 Introduction to C Programming   **3 Credits**
Prerequisites: Demonstrated competency through appropriate assessment or earning a grade of "C" or better in MAT 050. An introduction to the "C" programming language. No programming experience is needed. After completing this course the students will have a good

understanding of programming concepts, and terminology and should be able to pick up another programming language if interested. The course is designed to prepare students to use C to solve technical and engineering problems, such as programming microprocessors.

ECT 211 AC Circuit Analysis   4 Credits
Prerequisites: ECT 121. AC circuits, including the j operator, phasors, reactance, and impedance are studied. Circuit laws, network theorems, and the fundamental concepts of Fourier analysis are applied and used in the study of topics such as passive filters, IC filters, amplifiers, resonant circuits, single phase and three phase circuits. Computer aided analysis of circuits is used.

ECT 222 Introduction to Microcontrollers   4 Credits
Prerequisites: ECT 122 and ECT 128. An introduction to microcontroller hardware and software, focusing on embedded control applications. Interconnections of components, peripheral devices, bus timing relationships, structured C-language programming, debugging, input/output techniques, and use of PC-based software development tools are studied.

EDU 101 Introduction to Teaching   3 Credits
Prerequisites: Demonstrated competency through appropriate assessment or earning a grade of "C" or better in ENG 025, ENG 032 and MAT 044. An introductory course which provides a general introduction to the field of teaching. Students will explore educational careers, teaching preparation and professional expectations as well as requirements for teacher certification. Current trends and issues in education will be examined. Students will reflect on their own reasons for entering the teaching profession during a service learning experience.

EDU 103 Personal Health   3 Credits
Prerequisites: Demonstrated competency through appropriate assessment or earning a grade of "C" or better in ENG 025 and ENG 032. Introduces prospective teachers to the health issues children face. This course includes approaches to health appraisal, intervention strategies, and follow-up to health care issues for children. Special emphasis is placed on the physiological and psychological issues for children's health presented by AIDS, substance abuse, child abuse, eating disorders, suicide, and violence in the schools.

EDU 104 Movement for Children   2 Credits
Prerequisites: None. Introduces principles of developmentally appropriate movement programs for elementary students.

EDU 121 Child and Adolescent Development   3 Credits
Prerequisites: Demonstrated competency through appropriate assessment or earning a grade of "C" or better in ENG 025 and ENG 032. Examines the physical, social, emotional, cognitive, and moral development of the childbirth through adolescence with a focus on the middle years through adolescence. Basic theories of child develop-

ment, biological and environmental foundations of development, and the study of children through observation and interviewing techniques are explored. The influence of parents, peers, the school environment, culture and the media are discussed.

**EDU 130 Introduction to Multicultural
Teaching   3 Credits**
Prerequisites: EDU 101. This course examines social and cultural conditions that influence education. The purpose is to assist students in understanding diversity and how to use this knowledge effectively within the schools and community. The course pursues an in-depth study of self, familial cultural heritage, and awareness of cultural differences. The course examines inclusive methods of teaching.

EDU 156 Transition to Baccalaureate Education   1 Credit
Prerequisites: None. This course is designed to prepare the student to fulfill requirements of the education profession, working with children in both instructional and non-instructional settings. The requirements of the teaching profession will be addressed. Appropriate completion of such requirements will be attained as skill development focuses on preparation for professional entrance exams and for transition to a Baccalaureate Degree program.

EDU 200 Education and the Community   3 Credits
Prerequisites: EDU 101 and SOC 111. Focuses on the community, school, and family partnerships, including curriculum, philosophies, and partner's role in these areas. The course promotes awareness of families as the children's first teacher, as well as culture, values, language, and attitudes. Addresses ways to design and deliver parent teacher conferences, parent education, and parent involvement in schools and community.

EDU 201 Using Computers in Education   3 Credits
Prerequisites: EDU 101. Introduction to instructional computing and educational computing literature. Provides hands-on experience with educational software, utility packages, and commonly used microcomputer hardware.

EDU 230 The Exceptional Child   3 credits
Prerequisites: EDU 101 and EDU 121. Provides an introduction to caring for the exceptional child. Includes theories and practices for producing optimal developmental growth. Develops teaching techniques. Explores public policy, inclusion, early intervention, and IEP's (laws). Explores the types of special needs and provides opportunities through field experience to practice methods for helping children within special education and gifted/talented programs.

EDU 250 Educational Psychology   3 credits
Prerequisites: EDU 101 and PSY 101. Focuses on the study and application of psychological concepts and principles as related to the teaching-learning process. Topics covered include educational

research methods, cognitive and language development, personal, social, and moral development, behavioral learning, motivation, effective teaching, and measurement and evaluation. This course requires a 40 hour field experience.

EDU 261 Practicum   3 credits
Prerequisites: Program Chair Approval. Provides opportunities for practical experience through observation and supervised participation and assessment in a school-age setting. Students will develop and implement appropriate environments and activities. Requires 144 hours of field experience.

EDU 270 Contemporary Issues in Education   3 credits
Prerequisites: Program Chair Approval. Surveys and further examines educational philosophies, theories and theorists. Encourages students to form their own theories for learning, discipline, family involvement and self-concept development. Guides students in the development of a professional graduation portfolio. This is a capstone course and requires program chair approval.

EGR 116 Geometric Modeling for Visualization   2 Credits
Prerequisites: MAT 050. This is a fundamental course which introduces students to geometric modeling for visualization and communication. Modeling construction techniques to produce computer models for graphic visualization and communication will be explained and used.

EGR 140 Introduction to Engineering   3 Credits
Prerequisites: MAT 132. This course introduces the students to the engineering profession and to computer programming. The programming techniques which will be introduced are applicable to all computer languages. The C programming language will also be introduced. Examples and engineering applications will be used to illustrate programming concepts.

EGR 160 Introduction to Engineering II   3 Credits
Prerequisites: EGR 140. Introducing students to object-oriented programming and design. Emphasis on engineering application.

EGR 190 Introduction to Engineering Design   2 Credits
Prerequisites: MAT 132. This introductory course provides the student an opportunity to be introduced with fundamentals of the design process from mechanical and electrical aspects.

EGR 251 Electrical Circuits I   4 Credits
Prerequisites: MAT 212. Provides an integrated lab/lecture sequence in which students are introduced to the fundamentals of circuit analysis. Topics include resistive, capacitive, and inductive circuit elements, nodal and mesh analysis, transient response of RLC circuits, steady state sinusoidal response, operational amplifiers, and an introduction to diodes and transistors.

EGR 252 Electrical Circuits II   4 Credits
Prerequisites: EGR 251. An integrated lab/lecture course which contin-

ues EGR 251. This course covers sinusoidal steady state analysis, LaPlace and Fourier analysis, transistors, diodes, op-amps, and three-phase systems. An introduction to computer aided design and analysis is provided.

EGR 260 Vector Mechanics-Statics   3 Credits
Prerequisites: MAT 212. Includes resolution and composition of forces, moments, principles of equilibrium and application to trusses and jointed frames, friction, center of gravity and second moments of areas. Uses vector analysis throughout.

EGR 261 Dynamics   3 Credits
Prerequisites: EGR 260. Covers rectilinear and curvilinear motions, force, mass and acceleration, projectiles, pendulums, inertia forces in machines, work and energy, impulse and momentum and impact.

EGR 270 Engineering Project Management   3 Credits
Prerequisites: After 45 credit hours in the program. An introduction to principles of engineering project management and techniques. Topics include technical feasibility studies, project specifications, scheduling, validation, life cycle costing, and economic analysis. The focus is on managing an engineering project through scheduling, budgeting, resource management, execution and control.

ELT 118 Soldering   1 Credit
Prerequisites: None. Students practice and develop skills soldering and desoldering through-hole and surface mount components. Students will use and maintain commercial grade solder/desolder stations. Also students will be introduced to basic fabrication techniques.

ELT 120 Introduction to Electronics   3 Credits
Prerequisites: None. Corequisites: Demonstrated competency through appropriate assessment or earning a grade of "C" or better in MAT 050. Provides the student with limited preparatory study an entry into program level content. Introduces the basics of electricity and electronics. Discusses atomic theory as related to electrical fundamentals, resistance, conductance, Ohms Law, series circuits, parallel circuits, and simple series-parallel circuits. Topics include laboratory skills, basic manipulative skills, interpretation of diagrams, and hand soldering techniques. Emphasis is placed upon the use of electronic circuit simulation software to model and analyze electronic components and circuits.

ELT 121 Circuits I   3 Credits
Prerequisites: MAT 111 or demonstrated competency and ELT 120. Develops intermediate to advanced understanding of electricity and electronics relating to passive DC circuits. Discusses series-parallel circuits, voltage and current dividers, Kirchhoff's Laws, network analysis (superposition, Thevenin, etc.), loading effects, maximum power transfer, and magnetism. Uses lab work to reinforce course theory and stress the proper use of test equipment.

ELT 122 Circuits II   3 Credits
Prerequisites: ELT 121 and MAT 131 or MAT 134. Studies electrical principles and laws pertaining to alternating current and voltage. Covers characteristics of AC voltages and currents, capacitance, inductance, transformers, reactance, impedance, AC network theorems, j operator, phase relationships, phasors, resonance, filters, AC power, and polyphase circuits.

ELT 124 Digital I   3 Credits
Prerequisites: Demonstrated competency through appropriate assessment or earning a grade of "C" or better in MAT 050. Introduces digital electronics, including logic gates and combinational logic circuits. Studies binary arithmetic, Boolean algebra, mapping techniques, digital encoders and decoders, multiplexers and demulitplexers, parity circuits, and arithmetic circuits. Uses SSI and MSI digital integrated circuits.

ELT 125 Digital II   3 Credits
Prerequisites: ELT 124. Offers advance study of digital systems, flip-flops, memory, digital-to-analog and analog-to-digital conversion. Covers construction of specified timing circuits, driver/display systems, shift registers, counters, the arithmetic logic unit, and validation of operation. Studies hardware and general microprocessor system organization.

ELT 126 Solid State I   3 Credits
Prerequisites: ELT 122. Studies characteristics and applications of semiconductor devices and circuits. Covers PN junction theory, signal and rectifying diodes, discrete power supplies, zener diodes, zener diode voltage regulators, special-purpose diodes, bipolar transistors, biasing techniques, load lines, single and multistage amplifiers, and equivalent circuits.

ELT 127 Industrial Electronics   3 Credits
Prerequisites: ELT 126. Presents an overview of electronics in the industrial setting. Instruct students in how electronics is applied to industrial systems. Introduces power machines, polyphase systems, solid-state controls, transducers and industrial computer systems.

ELT 128 Introduction to Lasers   3 Credits
Prerequisites: MAT 131 or MAT 134 or MAT 137. Introduces laser action, laser beam characteristics, types of lasers, safety considerations, general laser applications, laser and optical equipment. Teaches basics of laser systems and prepares beginning laser students for future courses. Includes an overview of lasers, physical basics, how lasers work, laser characteristics, laser accessories, gas lasers, solid-state lasers, semiconductor lasers, and other types of lasers. It also includes a brief overview of low-power laser and high-power applications.

ELT 130 Fiber Optics   3 Credits
Prerequisites: ELT 122. Presents overview of fiber optics. Studies uses

for fiber optics, advantages, cable details, connectors, splices, sources, detectors and fiber optic systems.

ELT 140 Networking   3 Credits
Prerequisites: Demonstrated competency through appropriate assessment or earning a grade of "C" or better in ENG 025 and ENG 032 and MAT 050. Study of types of protocols used in data communication systems. Includes an overview of networking, networking control, and interfacing. Areas of emphasis includes protocols, packet switching systems, local area networks, and the OSI model.

ELT 203 Introduction to Industrial Controls   3 Credits
Prerequisites: ELT 221 and ELT 223. Studies basics of controls related to industrial electronics. Includes basic and pilot control devices such as circuit layouts, industrial schematics, reduced voltage starters, multi-speed controllers, and solid-state controls. Covers transformer hook-ups and circuit protection.

ELT 214 Industrial Instrumentation   3 Credits
Prerequisites: ELT 126. Provides a system view of manufacturing and automated production emphasizing the devices used in control and measurements. Areas covered include pressure, strain, force, flow, and level considerations. Principles of process control are introduced, incorporating the usage of probes, sensors, transducers, and various final control devices. Computer software, hardware, and interfacing are examined in regards to data acquisition, manufacturing control, and summarization of industrial data.

ELT 219 Biomedical Electronics I   3 Credits
Prerequisites: ANP 101 or BIO 100 and HHS 101 and ELT 126. Offers study of medical electronics equipment, including ECG, EEG, defibrillators, heart monitors and other monitoring and respiratory equipment.

ELT 220 Biomedical Electronics II   3 Credits
Prerequisites: ELT 219. Studies medical support systems including x-ray equipment, respirators and analyzers, and their maintenance. Studies medical ultrasound, electro surgery units and mechanical recorders. Prepares students for licensing and certification.

ELT 221 Solid State II   3 Credits
Prerequisites: ELT 126. Continues the study of bipolar transistors with additional circuit configurations including the emitter follower and the Darlington. Studies power amplifiers, amplifier classifications, unipolar transistors, and thyristors. Includes discreet FETs, SCRS, UJTs, oscillators, linear regulated power supplies, and switching regulators. Discusses frequency effects and response of amplifiers.

ELT 222 Microprocessors   3 Credits
Prerequisites: ELT 125. Introduces microprocessor system organization, operation, design, troubleshooting and programming. Investigates and analyzes a microprocessor instruction set for its operation. Includes programming and interfacing a microprocessor.

ELT 223 Electrical Machines 3 Credits
Prerequisites: ELT 122. Provides an overview of electrical machines and how they relate to industrial electronics. Gives industrial electronics technicians insight into electrical power generation, polyphase system, transformers, all types of electrical motors, power factor and power factor correction, back-up power and electrical power monitoring.

ELT 224 Linear Integrated Circuits 3 Credits
Prerequisites: ELT 126. Introduction to Operational Amplifiers, their characteristics, operation and application, to linear and nonlinear circuits. Topics covered are the general introduction to Op Amp IC's, inverting and non-inverting amplifiers, comparators, frequency effects, differential, instrumentation and bridge amplifiers, and active filters.

ELT 225 Introduction to National Electrical Code 3 Credits
Prerequisites: None. Introduces the role and use of the National Electrical Code Book. Provides an overview of interpretation, calculations, and revisions of the codebook.

ELT 226 Computer Troubleshooting 3 Credits
Prerequisites: ELT 124. A study of techniques for logical troubleshooting of microcomputer systems. Emphasizes basic system components including power supplies, motherboards, memory, floppy and hard disk drives, operation of video displays, and keyboard and mouse connections. Emphasizes system-oriented troubleshooting procedures.

ELT 227 Peripherals 3 Credits
Prerequisites: ELT 124. Studies peripherals commonly used with computers and microcomputers and the interfacing with those peripherals. Includes printers, scanners, modems, NICs, video adapters and displays, keyboards and mouse, sound systems, and CD-ROM and DVD-ROM drives. Also includes a study of data communications hardware and techniques. Studies techniques for logical troubleshooting of microcomputer systems.

ELT 228 Communications Electronics 3 Credits
Prerequisites: ELT 221. Analyzes communication circuits with emphasis on AM, FM, SSB, transmitters and receivers, transmission lines, antennas, and wave propagation. Includes dB gain and attenuation, noise, modulation and demodulation principles, phase-locked loop, RF amplifiers, automatic gain control, detectors, limiters and discriminators. Offers hands-on lab exposure to analog circuits utilizing analysis and troubleshooting techniques.

ELT 229 Telecommunications 3 Credits
Prerequisites: ELT 124. Presents an in-depth view of the telecommunication industry from the very beginning to today's cellular, Internet, and broadband technologies. Examines various methods in transmitting digital data from one location to another. Covers transmission medias, time and frequency multiplexing, modulation applications,

routing networks, communications hardware, protocols, telephone networks, and Internet systems. Cellular, cable broadband, and emerging technologies are also introduced.

ELT 230 Advanced Communications Electronics 3 Credits
Prerequisites: ELT 228. The basics of antenna principles and wave propagation together with an in-depth study of matching techniques for transmission lines. Includes the Smith Chart and a thorough study of television operation. Radiation patterns will be measure with different antenna arrays. Signal tracing troubleshooting techniques will be practiced on a color TV set.

ELT 233 Industrial Motors and Controls 3 Credits
Prerequisites: ELT 122. Provides a complete understanding of basic ladder and wiring diagrams used in the control of electric motors. Includes the various electrical components and their functions as applied to motor controls. Topics include the various types of motors used in applying electro-mechanical power, ranging from small AC shaded-pole fan motors through larger three-phase motors. Motor starting components, protective devices, heat dissipation, motor slippage and frequency and multispeed motors are discussed. Lab assignments allow the student a hands-on approach to wiring various control components in the operation of three-phase motors.

ELT 234 Advanced Problem Solving 3 Credits
Prerequisites: Program Advisor Approval. Introduces logical troubleshooting of electronic circuits and systems with emphasis on systematic diagnostic methods and technical reference research. Provides further experience in the use of test equipment and proper repair techniques. Includes job preparedness skills and preparation for appropriate certification testing.

ELT 235 Process Control 3 Credits
Prerequisites: ELT 126. Presents an in-depth view of process control theory and applications. Topics covered are open and closed loop systems, feedback concepts, signal conditioning, standards and terminology, controller principles and loop characteristics. Concepts of thermal, mechanical, optical sensor devices are emphasized as measurement control. Transducers and final control actuators are examined.

ELT 237 Calibration 3 Credits
Prerequisites: ELT 126. Provides an introductory overview of procedural calibration for instruments (electronic and pneumatic) found in today's controlling environments and industry. Instrument evaluation, installation, and calibration are the emphasis for this course. Dismantling and calibration of DP cells, gauges, valve positioners, thermocouple circuits, control elements, and other industrial instruments are incorporated throughout the course.

ELT 238 Process Instrumentation 3 Credits
Prerequisites: ELT 126. Presents the concepts and fundamentals of

measurement instrumentation and its application to industrial process control. Introduces basic device symbols and instrumentation terminology. Includes measurement principles and techniques involving temperature, pressure, flow, level, displacement, strain, load, torque, vibration, humidity, density/specific gravity, gas analysis, and conductivity. Discusses open versus closed loop control and the application of combinations of proportional, integral, and derivative control methods. Includes chart.

ELT 239 Troubleshooting Techniques 3 Credits
Prerequisites: ELT 125 and ELT 221. Introduces techniques of logical troubleshooting of electronic circuits and systems with emphasis on systematic diagnostic methods, signal tracing and signal injection methods. Provides further experience in the use of test equipment and proper repair techniques. Class sessions will consist of lecture, discussion, and problem recitation. Problem-solving and laboratory assignments will reinforce concepts in the reading and lecture experience.

ELT 251 Electrical Circuits I 4 Credits
Prerequisites: MAT 212. Provides an integrated lab/lecture sequence in which students are introduced to the fundamentals of circuit analysis. Topics include resistive, capacitive, and inductive circuit elements, nodal and mesh analysis, transient response of RLC circuits, steady state sinusoidal response, operational amplifiers, and an introduction to diodes and transistors.

ELT 252 Electrical Circuits II 4 Credits
Prerequisites: ELT 251. An integrated lab/lecture course which continues ELT 251. This course covers sinusoidal steady state analysis, LaPlace and Fourier analysis, transistors, diodes, op-amps, and three-phase systems. An introduction to computer aided design and analysis is provided.

ENG 001 Elementary English for Speakers of Other Languages 3 Credits
Prerequisites: Demonstrated ability to write and understand simple statements and questions on familiar topics. The suggested range on the English Placement Test is 20-35. Emphasizes writing elementary statements, reading and understanding elementary materials, and expanding competence in speaking and listening.

ENG 002 Intermediate English for Speakers of Other Languages 3 Credits
Prerequisites: Demonstrated intermediate competency in English with ability to read, write, and speak using basic language skills. The suggested range on the English Placement Test is 36-52. Emphasizes writing, reading and speaking with increasing competence in academic and social situations.

ENG 003 Pre-academic English for Speakers of Other Languages 3 Credits
Prerequisites: Demonstrate fair control of most sentence structure.

expository materials, statement, and conversation in social and academic settings. The suggested range on the English Placement Test is 53-68. Emphasizes paragraph organization, reading and understanding expository and academic materials through vocabulary development. Develops comprehension of social and academic conversations and lectures.

ENG 004 Academic English for Speakers of Other Languages 3 Credits
Prerequisites: Demonstrate ability to write with some ease, understand expository and academic reading material, understand lectures, and converse in academic and social situations. The suggested range on the English Placement Test is 69-83. Emphasizes expository writing, finding main ideas and details in academic texts, and understanding and speaking in academic settings.

ENG 007 Spelling 1 Credit
Prerequisites: None. Improves basic spelling competencies through practice and attention to spelling rules and exceptions.

ENG 010 English for Speakers of Other Languages– Reading I 3 Credits
Prerequisites: CASAS/IRCA Pre-enrollment Appraisal. Develops basic reading skills in English using texts on subjects relating to life skills and cultural values. Emphasizes vocabulary acquisition, dictionary use, and reading strategies for basic comprehension and interpretation.

ENG 011 English for Speakers of Other Languages– Reading II 3 Credits
Prerequisites: None. Stresses comprehension skills and reading strategies using materials which focus on personal and cultural values. Focuses on vocabulary expansion, comprehension and interpretation strategies, and experience with a variety of reading styles. Provides practice in increased reading proficiency.

ENG 012 English for Speakers of Other Languages – Reading III 3 Credits
Prerequisites: None. Stresses comprehension skills and reading strategies with academic materials. Focuses on vocabulary expansion, transitional development, and critical analysis of academic writing. Provides practice in increased reading proficiency.

ENG 013 English for Speakers of Other Languages – Listening/Speaking I 3 Credits
Prerequisites: CASAS/IRCA Pre-enrollment Appraisal. Focuses on listening and speaking strategies for comprehensible input. Provides practice recognizing and producing speech patterns of American English. Allows for conversational practice on topics of cultural values and behaviors.

ENG 014 English for Speakers of Other Languages-Listening/Speaking II 3 Credits
Prerequisites: Level I ESL Listening/Speaking Mastery. Provides prac-

tice in recognizing and producing speech patterns of American English. Allows for conversational practice with emphasis on cross-cultural values and behaviors and the use of idioms.

ENG 015 English for Speakers of Other Languages-Listening/Speaking III 3 Credits
Prerequisites: Level II ESL Listening/Speaking Mastery. Provides experience in recognizing and producing speech patterns of American English. Allows for conversational practice relating to academic and cultural subjects, with an emphasis on critical thinking skills expressed verbally. Gives the student ample exposure to language use from sources both in and out of the classroom. Language tasks which require problem solving by interpersonal communications.

ENG 016 English for Speakers of Other Languages – Grammar/Structure I 3 Credits
Prerequisites: CASAS/IRCA Pre-enrollment Appraisal. Focuses on the acquisition of basic patterns of structure and syntax for controlled communication. Emphasizes form, meaning, and usage of basic structures in American English. Provides practice through extensive and varied communicative activities.

ENG 017 English for Speakers of Other Languages – Grammar/Structure II 3 Credits
Prerequisites: Level I ESL Grammar/Structure Mastery. Focuses on the study and acquisition of patterns of advanced structure and syntax. Emphasizes the acquisition of sentence structure for verbal and written communication of ideas and their relationship.

ENG 018 English for Speakers of Other Languages-Grammar/Structure III 3 Credits
Prerequisites: ENG 017. Focuses on the acquisition of more advanced patterns of structure and syntax. Emphasizes the development of competent verbal and written expression in critical analysis for academic purposes.

ENG 019 English for Speakers of Other Languages – Writing I 3 Credits
Prerequisites: CASAS/IRCA Pre-enrollment Appraisal. Focuses on conventions for basic written communication in English, emphasizing sentence construction and paragraph development. Uses writing strategies to produce coherent expression in journals, free writing exercises, paragraphing, and short essays. Student collaboration is part of the learned writing process.

ENG 020 English for Speakers of Other Languages – Writing II 3 Credits
Prerequisites: Level I ESL Writing Mastery. Focuses on techniques of written communication for coherent expression of ideas, through paragraph development and essay writing. Emphasizes the writing process using strategies for pre-writing, development, and revision through peer collaboration. Highlights the structure and syntax of written expression for effective communication.

ENG 021 English for Speakers of Other Languages – Writing III 3 Credits
Prerequisites: Level II ESL Writing Mastery. Focuses on techniques of written communication for the analysis and elaboration of academic material through paragraph and essay writing. Emphasizes the strategies of the writing process through rhetorical modes of composition for varied purposes. Stresses the extended use of syntax and structure for thoroughly coherent expression.

ENG 024 Introduction to College Writing I 3 Credits
Prerequisites: Demonstrated competency through appropriate assessment. Enables the beginning college writer to develop control of the writing process by focusing on paragraph development. Requires students to demonstrate proficiency in basic standard writing conventions, including grammar and mechanics. Prepares students for entry into ENG 025.

ENG 025 Introduction to College Writing II 3 Credits
Prerequisites: Demonstrated competency through appropriate assessment or earning a grade of "C" or better in ENG 024. Builds on the competencies learned in ENG 024 and prepares students for entry into college level composition by focusing on essay development. Enables beginning college writers to expand control of the writing process. Requires students to demonstrate increased proficiency in the use of standard writing conventions. Introduces the processes of research and documentation.

ENG 028 Vocabulary Building 1 Credit
Prerequisites: None. Focuses on developing general English vocabulary. Includes dictionary skills, context skill and word structure analysis.

ENG 031 Reading Strategies for College I 3 Credits
Prerequisites: Demonstrated competency through appropriate assessment. Increases performance in reading flexibility, vocabulary, and comprehension. Introduces critical reading skills and study strategies and their applications.

ENG 032 Reading Strategies for College II 3 Credits
Prerequisites: Demonstrated competency through appropriate assessment or earning a grade of "C" or better in ENG 031. Advances performance in reading flexibility, vocabulary, and comprehension. Emphasizes critical reading and strategies for effective study of college level text.

ENG 111 English Composition TransferIN 3 Credits
Prerequisites: Demonstrated competency through appropriate assessment or earning a grade of "C" or better in ENG 025 and ENG 032. Designed to develop students' abilities to think, organize, and express their ideas clearly and effectively in writing. This course incorporates reading, research, and critical thinking. Emphasis is placed on the various forms of expository writing such as process, description, narration,

comparison, analysis, persuasion, and argumentation. A research paper is required. Numerous in-class writing activities are required in addition to extended essays written outside of class.

ENG 112 Exposition and Persuasion TransferIN 3 Credits
Prerequisites: A grade of "C" or better in ENG 111. Builds on the writing skills taught in ENG 111 and emphasizes research-based analytic and argumentative writing.

ENG 202 Creative Writing   TransferIN 3 Credits
Prerequisites: ENG 111. This course introduces students to opportunities for self-expression in one or more literary genres - fiction, poetry, drama, and the creative essay.

ENG 206 Introduction to Literature   3 Credits
Prerequisites: ENG 111. Development of basic strategies for critically reading and interpreting poetry, fiction, and drama; introduction to the premises and motives of literary analysis and critical methods associated with various literary concerns through class discussion and focused writing assignments.

ENG 210 Literature and Life: Thematic   3 Credits
Prerequisites: ENG 111. A thematic introductory literature course. Students will read American and/or English literature in relation to a specific cultural problem or theme. Students will be introduced to critical/literary approaches, draw conclusions about similarities and differences between texts (both in terms of content and technique), and practice written response to the texts.

ENG 211 Technical Writing   TransferIN 3 Credits
Prerequisites: A grade of "C" or better in ENG 111. Builds on the writing skills taught in ENG 111. Requires students to prepare technical reports and correspondence for various purposes using standard research techniques, documentation, and formatting as appropriate. May require students to demonstrate both written and oral competencies.

ENG 212 Western Literature I   3 Credits
Prerequisites: ENG 111. Introduces Western Classical Literature from Antiquity to Chaucer. Presents representative texts and stresses reflective and intensive reading from the major historical periods. Emphasizes aesthetic appreciation of literature, cultural and philosophical issues of its emergence.

ENG 213 Western Literature II   3 Credits
Prerequisites: ENG 111. Introduces Western Classical Literature from Shakespeare to the Modern Era. Presents representative texts and stresses reflective and intensive reading from the major historical periods. Emphasizes aesthetic appreciation of literature, and cultural and philosophical issues of its emergence.

ENG 214 Introduction to Poetry   3 Credits
Prerequisites: ENG 111. Provides an introduction to the art and history of poetry. Emphasizes a greater appreciation and understanding of the genre through critical analysis of various poetic forms and literary devices.

ENG 220 Introduction to World Literature I
TransferIN 3 Credits
Prerequisites: ENG 111. A survey of literature course designed to acquaint the student with influential works from the ancient Greeks to Shakespeare. Included in assigned readings will be epic poetry, the sonnet, drama, and the philosophic essay. Combines practice in advanced expository writing with literary study.

ENG 221 Introduction to World Literature II
TransferIN 3 Credits
Prerequisites: ENG 111. A survey of literature course designed to acquaint the student with influential works from Shakespeare to the present. Included in assigned readings will be work by the Eastern, Continental, British, and American authors. Instruction in research techniques and writing research papers is combined with literary study.

ENG 222 American Literature I   TransferIN 3 Credits
Prerequisites: ENG 111. This course is designed to survey major American poets and prose writers from the early Colonial period to the time of the Civil War. Included will be a discussion of the major historical, cultural, intellectual, and political events which influenced the authors.

ENG 223 American Literature II   TransferIN 3 Credits
Prerequisites: ENG 111. This course is designed to survey major American poets and prose writers from the Civil War to the present. Included will be a discussion of the major historical, cultural, intellectual, and political events which influenced the authors.

ENG 224 Survey of English Literature I   3 Credits
Prerequisites: ENG 111. Survey of English Literature I introduces the student to British literature from Beowulf to the eighteenth century. Included will be a discussion of the major historical, cultural, intellectual, and political events which influenced the development of British literature.

ENG 225 Survey of English Literature II   3 Credits
Prerequisites: ENG 111. Survey of English Literature II introduces the student to British literature from the Romantic, Victorian, and modern periods. Included will be a discussion of the major historical, cultural, intellectual, and political events which influenced the development of British literature.

ENG 227 Introduction to World Fiction   3 Credits
Prerequisites: ENG 111. This general survey course introduces the

genre of fiction through a focus on world authors. It examines themes and literary devices present in novels and short stories.

ENG 240 Children's Literature   TransferIN 3 Credits
Prerequisites: ENG 111. This course provides a survey and analysis of classic and modern children's literature for students interested in understanding literature read to/by children preschool-middle school. The course focuses on different genres of literature and may include picture books, folk tales, poetry, short stories, and novels. In addition, the role of art, illustrations, and media adaptations will be examined in conjunction with children's literature throughout the years.

ENG 245 Literature of the Old Testament   3 Credits
Prerequisites: ENG 111. Surveys the Old Testament/Hebrew Scripture as a literary work. Emphasizes history, composition, structure, cultural context, and recognizing the contribution it has made to human development.

ENG 249 Linguistics   3 Credits
Prerequisites: ENG 111. Designed to introduce students to the various disciplines which comprise the scientific study of language. These include a survey of applied, comparative, descriptive, and historical linguistics. The course will primarily focus on the English language.

ENG 250 English Grammar   3 Credits
Prerequisites: ENG 111. An in-depth study of the grammatical structures of American English. A course designed to acquaint students with descriptions of modern English syntax.

ENV 101 Introduction to Environmental
Technology   3 Credits
Prerequisites: None. Designed to introduce the student to environmental technology, the EPA, toxics, hazardous materials, and other waste topics. The course will touch on the subjects of weapons of mass destruction, chemistry, birth defects, and some other common ailments. Biological warfare topics will be discussed, protection for the hazardous materials situations, and protection for the fire fighting personnel in the event of an emergency.

ENV 102 Environmental Management   3 Credits
Prerequisites: None. Designed to introduce the student to environmental management, how the environmental regulations evolved, the EPA, OSHA, NIOSH, and ADA. Environmental crimes will be discussed, how the government is enforcing the rules, weapons of mass destruction, biological warfare, and treatment and disposal of the toxic wastes.

ENV 104 Plant Operations – Sanitary   3 Credits
Prerequisites: Program Advisor Approval. Provides the basic principles of aerobic and anaerobic biological treatment processes, including activated sludge, trickling filters, lagoons, sludge handling and

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disinfection. Reviews state and federal regulations related to waste-water plants.

ENV 105 Air Quality Management 3 Credits
Prerequisites: CHM 101. This course is designed to introduce the student to environmental air quality problems experienced, laws enforced and enacted by the EPA as well as others, toxicity, noise pollution, global air pollution, and a brief history of the EPA, and some of their accomplishments.

ENV 106 Water Quality Management 3 Credits
Prerequisites: CHM 101. This course is designed to introduce the student to water management, how the environmental regulations evolved, the EPA, OSHA, NIOSH, and ADA. Environmental crimes will be discussed, how the government is enforcing the rules, weapons of mass destruction, biological warfare, and treatment and disposal of the toxic wastes. Water resources, contamination, and what is happening to clean the water we drink.

ENV 110 Environmental Toxicology 3 Credits
Prerequisites: None. This course is designed to introduce the student to environmental toxicology, how it affects our bodies, our breathing, our environment we live in, the places we work, eat, and live. This course also tries to explain some of the conditions in industries, various laws that have been enacted and passed to protect the general population.

ENV 208 Plant Operations – Industrial 3 Credits
Prerequisites: Program Advisor Approval. Covers wastewater treatment processes including coagulation, sedimentation, activated sludge, neutralization, equalizations and cyanide and chromate removal. Presents instrumentation, maintenance and troubleshooting. Includes operations, laboratory testing and associated mathematics.

FIT 100 Lifetime Fitness and Wellness 2 Credits
Prerequisites: None. Educates students about the importance of fitness/wellness in their everyday lives. Students will have the opportunity to customize their own behavioral plans for fitness/wellness.

FRE 101 French Level I TransferIN 4 Credits
Prerequisites: Demonstrated competency through appropriate assessment or earning a grade of "C" or better in ENG 025 and ENG 032. Introduces the French language and culture through communicative activities intended to develop oral communication and listening comprehension skills. Emphasis is placed on learning basic grammar and vocabulary necessary for successful communication while laying a foundation for further study.

FRE 102 French Level II TransferIN 4 Credits
Prerequisites: FRE 101 or demonstrated competency in French through appropriate assessment; demonstrated competency in reading and writing through appropriate assessment or earning a grade of

"C" or better in ENG 025 and ENG 032. Continued study of the French language and culture through communicative activities intended to develop oral communication and listening comprehension skills. Emphasis is placed on continuing to learn the basic grammar and vocabulary necessary for successful communication and to improve skills developed in French Level I.

FRE 201 French Level III 4 Credits
Prerequisites: FRE 102 or demonstrated competency in French through appropriate assessment; demonstrated competency in reading and writing through appropriate assessment or earning a grade of "C" or better in ENG 025 and ENG 032. This course continues the development of the core skills (listening, speaking, reading and writing) in the target language, but shifts the emphasis toward further developing reading and writing skills through expanding the student's vocabulary and sharpening their grammatical competence. The course also seeks to develop an increased awareness of French and Francophone culture.

FRE 202 French Level IV 4 Credits
Prerequisites: FRE 201 or demonstrated competency in French through appropriate assessment; demonstrated competency in reading and writing through appropriate assessment or earning a grade of "C" or better in ENG 025 and ENG 032. As with FRE 201, this course continues the development of the core skills (listening, speaking, reading and writing) in the target language, but shifts the emphasis toward further developing reading and writing skills through expanding the student's vocabulary and sharpening their grammatical competence. The course also seeks to develop an increased awareness of French and Francophone culture.

FRN 101 Introduction to Forensic Science 3 Credits
Prerequisites: Demonstrated competency through appropriate assessment or earning a grade of "C" or better in MAT 050, ENG 025 and ENG 032. Introductory course dealing with the basic concepts in Forensic Science.

FRN 203 Crime Methods and Techniques 4 Credits
Prerequisites: FRN 101 and CHT 101. Advanced course addressing laboratory techniques used in Forensic Science.

GDN 110 Fundamentals of Gardening 3 Credits
Prerequisites: None. Studies the horticulture principles of garden plant structure, growth and development and soil science. Includes cultural practices, propagation techniques, plant care, nutrition, maintenance, and disease and insect control.

GDN 111 Aboriculture: Trees and Shrubs 3 Credits
Prerequisites: None. Studies the identification, selection criteria, growth habits, growing conditions, installation techniques and maintenance requirements for woody plantings, including evergreen and deciduous shade and ornamental trees, shrubs and vines.

GDN 112 Floriculture: Annuals and Perennials 3 Credits
Prerequisites: None. Studies the identification, selection and design criteria for herbaceous ornamentals found in garden beds, borders and containers. Students will research the growing conditions, planting techniques and maintenance requirements for perennial and annual plantings.

GDN 113 Turf Management: Grasses and Groundcovers 3 Credits
Prerequisites: None. Introduces the identification and selection criteria for grasses and groundcovers. Includes the growing conditions, installation techniques and maintenance requirements for a healthy lawn and landscape.

GDN 114 Garden Design I 3 Credits
Prerequisites: None. Survey of basic garden landscape design. Includes topics on plant types and uses, client requirements, design concepts, site analysis, and garden planting plans and project presentation methods. Emphasizes the principles and techniques for designing outdoor gathering and living places.

GDN 115 History of Garden Design 3 Credits
Prerequisites: None. An overview of the history of garden design and landscape architecture from antiquities through the 21st century. Students will research influential garden designers, landscape architects, garden restoration and current trends.

GDN 116 Theme Gardening 3 Credits
Prerequisites: None. Introduction to garden styles and border design. Students will create theme gardens with an emphasis on plant combinations, color, function and aesthetics. Includes studies in water, shade, wildlife, native, low-maintenance and container gardens.

GDN 231 Garden Design II 3 Credits
Prerequisites: INT 102 and GDN 114. Continuation of GDN 114. An advanced study of design principles, concept development, creative problem solving and planning skills through a master plan approach. Emphasizes the formation of working drawings and contract documents, barrier-free applications, business practices, project facilitation and the relationship between individuals and their surroundings.

GDN 232 Garden and Landscape Design III 3 Credits
Prerequisites: INT 105 and INT 216 and GDN 231. Continuation of GDN 231. Students will define and develop a program for an advanced landscape design problem from concept development through professional presentation. Emphasis is on research methodology and project comprehension and management.

GDN 233 Sustainable Design 3 Credits
Prerequisites: GDN 114 or INT 103. Presents the concepts of sustainable and health-conscious design integrating the built and the natural environment. Topics include site analysis; "green" home design consid-

erations, and the permaculture principles of soil building, multi-functional plantings, organic gardening, native species preservation, and ecological restoration.

GEO 207 World Geography 3 Credits
Prerequisites: Demonstrated competency through appropriate assessment or earning a grade of "C" or better in ENG 025, ENG 032 and MAT 044. A geographical analysis of the major physical, cultural, political and economic divisions of the world along with their characteristics, locations, human activities, and inter-relationships.

GRA 101 Graphic Media Fundamentals 3 Credits
Prerequisites: None. Explores the fundamentals of graphic art production. Provides hands-on training in manual page layout, and an introduction to electronic layout. Presents the concepts and fundamentals of measurement and typography. Problemsolving and laboratory assignments will reinforce concepts in the reading and lecture experience.

GRA 102 Introduction to Machine Printing 3 Credits
Prerequisites: GRA 104 and GRA 201. Provides a history and overview of the interrelationship of various printing processes. Course offers instructions in basic press operations. Covers materials and techniques utilizing equipment and tools necessary to operate a basic offset press.

GRA 104 Art and Copy Preparation 3 Credits
Prerequisites: None. Corequisites: GRA 201. Provides a foundation in design, typographic and communications concepts. Presents traditional techniques as well as computer aided technologies in the consideration of color, format and use of visuals in illustration. Emphasizes problem solving with assignments executed through strip-up of the negative into a flat and proofing.

GRA 106 Introduction to Color Printing 3 Credits
Prerequisites: GRA 104 and GRA 201. Corequisites: GRA 102 and GRA 202. Studies basic color theory, materials and methods used in the reproduction of color in printed materials. Covers techniques and materials with assignments utilizing different processes including four-color as well as spot color. Pre-separated negatives, halftones, registration and runs are covered. Includes in depth study of inks and color inking systems. Also covers digital color separations.

GRA 201 Photomechanical Reproduction 3 Credits
Prerequisites: None. Corequisites: GRA 104. Introduces image conversion in black and white and color theory. Examines photochemistry, halftones, darkroom techniques and diffusion transfers. Uses large format stat cameras.

GRA 202 Science of Color 3 Credits
Prerequisites: None. Covers the physical properties of light and color and the psychological aspects of color perception and color relationships. It develops an acute awareness of the use of color and color

theories in various visual and written terms. It covers primary, secondary and tertiary colors, their creation and use through a series of hands on projects.

GRA 213 Desktop Publishing 3 Credits
Prerequisites: VIS 115. This course covers computer techniques in pre-preparatory and preparatory composing procedures including electronic layout and typographic concepts. Emphasizes computer skills and output.

GRA 214 Screen Printing 3 Credits
Prerequisites: None. This course introduces the students to the basics of the Screen Printing process. Students will learn a process for reproducing graphic images on a wide variety of objects, from paper to wooden signs and ceramic objects. This course covers inking, substrates and transfer processes.

GRA 215 Computer Graphics II 3 Credits
Prerequisites: VIS 115. This course will showcase the design tricks and techniques of vector graphics use. It is assumed that students will already know computer basics and can take assigned projects from basic idea to completed artwork.

HEA 101 Heating Fundamentals 3 Credits
Prerequisites: None. Introduces fundamentals applicable to the heating phase of air conditioning. Includes types of units, parts, basic controls, functions, and applications. Emphasizes practices, tool and meter use, temperature measurement, heat flow, the combustion process and piping installation practices. Covers the basic sequence of operation for gas, oil and electric furnaces.

HEA 103 Refrigeration I 3 Credits
Prerequisites: None. Introduction to compression systems used in mechanical refrigeration including the refrigeration cycle and system components. Introduces safety procedures, proper use of tools used to install and service refrigeration equipment, refrigerant charging and recovery, system evacuation, calculating superheat and subcooling and using a refrigerant temperature/pressure chart.

HEA 104 Heating Service 3 Credits
Prerequisites: HEA 101. Covers procedures used to analyze mechanical and electrical problems encountered when servicing heating systems. Covers electrical schematics and connection diagrams, combustion testing, venting and combustion air requirements, sequence of operation, heating controls, troubleshooting techniques, installation practices, basic codes applying to furnace codes, and service procedures.

HEA 106 Refrigeration II 3 Credits
Prerequisites: HEA 103 and MIT 113. Continues the study of air conditioning and refrigeration with further study of compressors, metering devices, system charging, refrigerant recovery, equipment installation and an introduction to troubleshooting procedures [electrical,

mechanical and refrigeration]. Includes clean-up procedures following compressor burnout and analysis of how a single problem affects the rest of the system. Introduces electrical control systems and electrical motor basics as they apply to air conditioning and refrigeration including motor types, starting components, and motor troubleshooting basics.

HEA 107 Duct Fabrication and Installation 3 Credits
Prerequisites: None. Emphasizes reading blueprints common to the sheet metal trade, floor plans, elevations, section, detail and mechanical plans. Requires students to develop a layout of an air conditioning duct system and fittings. Fabrication of these parts, including proper use of hand-tools and shop equipment used to fabricate duct systems and fittings.

HEA 201 Cooling Service 3 Credits
Prerequisites: HEA 103. Covers procedures used to diagnose electrical, control, mechanical and refrigeration problems common to cooling systems. Familiarizes students with using the refrigeration cycle and temperature/pressure charts as diagnostic tools in troubleshooting refrigeration system problems. Includes various methods of checking refrigerant charges, methods for charging air conditioning and refrigeration systems, electrical and refrigeration system components, and schematic and pictorial diagrams.

HEA 202 Electrical Circuits and Controls 3 Credits
Prerequisites: MIT 113. Studies heating, air conditioning and refrigeration controls typically found on residential and light commercial heating and air conditioning equipment. Includes gas, oil and electric heating controls, cooling controls, thermostats, humidistats, aquastats, and electronic controls. Covers operation of controls, integration of controls into controls systems, reading schematic and pictorial diagrams, and component troubleshooting and testing.

HEA 203 Heat Loss and Gain Calculation 3 Credits
Prerequisites: Demonstrated competency through appropriate assessment or earning a grade of "C" or better in MAT 044. Introduces the student to calculating structural and other heat losses for winter heating, and structural and other heat gains for summer air conditioning using an industry standard method of heat loss and heat gain calculation. Discusses building construction techniques, energy consumption reduction methods and equipment selection.

HEA 204 Commercial Refrigeration 3 Credits
Prerequisites: HEA 106. Examines air conditioning and refrigeration systems for commercial use, including medium and low temperature applications. Includes specialized commercial refrigeration and A/C accessories, metering devices, setting pressure controls for direct temperature control, fan cycling and pump down, commercial ice production, methods of low ambient control, and advanced control arrangements.

HEA 205 Heat Pump Systems   **3 Credits**
Prerequisites: HEA 103. Familiarizes students with the refrigeration cycle as it applies to the heat pump system and the different types of heat pump systems. Covers procedures used to diagnose electrical, control, mechanical and refrigeration problems common to heat pump. Includes sizing of heat pumps, specialized heat pump refrigeration components and electrical controls, the air-to-air heat pump defrost cycle, and schematic and pictorial diagrams.

HEA 206 Advanced Cooling Service   **3 Credits**
Prerequisites: HEA 106. Studies methods of troubleshooting electrical and mechanical components of air conditioning and refrigeration systems.

HEA 207 HVAC Codes   **3 Credits**
Prerequisites: None. Study of state and local codes covering installation, repair, alteration, relocation, replacement and erection of heating, ventilation, cooling and refrigeration systems. Includes job-related costs of material and equipment, labor, warranty, taxes, permits and subcontracts. Students will estimate service and maintenance contracts.

HEA 209 Psychrometrics/Air Distribution   **3 Credits**
Prerequisites: Demonstrated competency through appropriate assessment or earning a grade of "C" or better in MAT 044. Studies the properties of air during the operational variations of temperature and humidity. Discusses the atmospheric conditions and the impact of those conditions on the heating-cooling and ventilation processes and the design of systems for residential and commercial structures. Includes the sizing and confi gurations of air delivery duct systems and system design methods.

HEA 212 Advanced HVAC Controls   **3 Credits**
Prerequisites: MIT 113. Covers control systems beyond ordinary residential and single zone commercial applications. Includes solid state controls, 0-10 volt DC and 4-20 milliamp control signals, zoning controls, modulating controls, low ambient controls, heat recovery and energy management controls, economizer controls, 3-phase motor protection modules, variable frequency drives [VFDs], remote sensing electronic thermostats, electronically commutated DC motor control, Direct Digital Control [DDC] systems, multiple-stage heating/cooling controls, PLC control of HVAC/R equipment and pneumatic controls.

HEA 213 Sales and Service Management   **3 Credits**
Prerequisites: None. Encompasses the use of blueprints, specifi cations, application data sheets, bid forms and contracts in estimating materials and labor in the HVAC business. Includes advertising, direct labor, indirect labor, overhead, warranty costs, taxes, permits, subcontracts, margins, mark-ups and profi t. Provides students with the opportunity to estimate service contracts and study service organization, service procedures, record keeping, parts inventory control, and liability insurance.

HEA 214 Applied Design   **3 Credits**
Prerequisites: None. Provides students with the opportunity to design and lay out complete HVAC systems.

HEA 220 Distribution Systems   **3 Credits**
Prerequisites: Demonstrated competency through appropriate assessment or earning a grade of "C" or better in MAT 044. Covers methods used in calculating building heat loss and gain plus how to use this data in sizing equipment and duct systems for residential and light commercial applications. Includes discussion of methods to reduce building heating/cooling loads, air flow principles, air delivery system design methods, and introduces using a psychrometric chart to solve air mixture problems.

HEA 221 Heat Pumps and Cooling Service   **3 Credits**
Prerequisites: HEA 101 and HEA 103. Covers procedures used to diagnose electrical, control, mechanical and refrigeration problems common to heat pump and cooling systems. Familiarizes students with the refrigeration cycle as it applies to the heat pump and the various methods of charging heat pumps and air conditioning systems. Includes sizing of heat pumps, the different types of heat pumps, and specialized heat pump components.

HHS 100 Introduction to Health Careers   **3 Credits**
Prerequisites: None. Presents information on the health care system and employment opportunities at a variety of entry levels. Includes an overview of health care development, how health delivery systems are organized, legal and ethical considerations of health care delivery, and an overview of various health care professions. Students are encouraged to explore health professions through assignments, observations and interviews.

HHS 101 Medical Terminology   **TransferIN 3 Credits**
Prerequisites: Demonstrated competency through appropriate assessment or earning a grade of "C" or better in ENG 025 and ENG 032. Addresses basic terminology required of the allied health professional and provides a basic knowledge of anatomy and physiology, pathology, special procedures, laboratory procedures, and pharmacology. Greek and Latin prefixes, suffixes, word roots, and combining forms are presented. Emphasis is on forming a foundation for a medical vocabulary including meaning, spelling, and pronunciation. Medical abbreviations, signs, and symbols are included.

HH5 103 Dosage Calculation   **1 Credit**
Prerequisites: Demonstrated competency through appropriate assessment or earning a grade of "C" or better in ENG 031 and MAT 050. Introduces the mathematical concepts required of the allied health professional to accurately administer medication.

HH5 104 CPR/Basic Life Support   **0.5 credit**
Prerequisites: None. Provides students with information necessary to recognize the need for one and two-person cardiopulmonary resuscitation (CPR) as it relates to adults, children and infants. Requires students to safely perform CPR and the use of AED according to American Heart Association guidelines.

HHS 105 Medical Law and Ethics   **3 Credits**
Prerequisites: Demonstrated competency through appropriate assessment or earning a grade of "C" or better in ENG 025 and ENG 032. Provides an overview of law and ethics for allied health professionals functioning in a variety of settings. Topical areas include: the legal system, standards and scope of care and practice, physician patient relationships, standards of professional conduct, public duties, documentation, employment laws and practices, pertinent federal/state statutes, ethical codes, and bioethical issues. The content will provide an understanding of ethical and legal obligations to self, patients, and employer.

HHS 107 CNA Preparation   **5 Credits**
Prerequisites: Regulations per the Indiana State Department of Health and Program Advisor Approval. Prepares individuals desiring to work as nursing assistants with the knowledge, skills and attitudes essential for providing basic care in extended care facilities, hospitals and home health agencies under the direction of licensed nurses. Presents information on the health care system and employment opportunities at a variety of entry levels. Includes an overview of the health care delivery systems, health care teams and legal and ethical considerations. Individuals who successfully complete this course are eligible to apply to sit for the Indiana State Department of Health (ISDH) certification exam for nursing assistants. This course meets the minimum standards set forth by the ISDH for Certified Nursing Assistant training. employer.

HHS 108 Advanced Cardiac Life Support   **1 credit**
Prerequisites: Successful completion of American Heart Association Basic Life Support Course including CPR for Adult, Child, Infant and AED. Provides students with information necessary to provide advanced cardiac life support safely using case scenarios, mock codes and following American Heart Association protocol and algorhythms.

HHS 109 Pediatric Advanced Life Support   **1 credit**
Prerequisites: Successful completion of American Heart Association Basic Life Support Course including CPR for Adult, Child, Infant and AED. Provides healthcare providers with sufficient knowledge to initiate advanced life support in a pediatric emergency, either in or out of hospital. Enhances the students' skills in evaluation and management of an infant or child respiratory and cardiac emergencies including cardiac arrest according to the 2005-2006 standards/guidelines of the American Heart Association.

HHS 110 Tuberculosis Training   **0.5 credit**
Prerequisites: None. Provides instruction to the participant on the classifications of tuberculosis, the incidences of tuberculosis and disease,

the common diagnostic procedures for tuberculosis, the common treatment regimens for tuberculosis, the correct techniques for administering a Mantoux skin test and the correct method of reading and recording the results of a Mantoux skin test. The students will be given a validation card from the ISBH (Indiana State Board of Health) and the ALA (American Lung Association) after successful completion of the course according to criteria set forth by both of the validating agencies.

HIT 101 Health Information Systems 3 credits
Prerequisites: Program Advisor Approval and demonstrated proficiency through appropriate assessment or successful completion of CIS 101. Provides opportunity for the investigation of career opportunities, ethics, history, and functions of a health information management profession. Presents the origination, content, and development of patient indices and patient records. Overview of the design, maintenance and use of manual and computerized health information systems for filing, numbering, and storage of patient information.

HIT 102 Health Data Content and Structure 2 credits
Prerequisites: HIT 101. Introduction to health data collections methods for health information systems. Study of the datasets and databases used in various healthcare settings. Overview of the creation and maintenance of health information disease registries and indexes. Overview of concepts influencing electronic and computerized patient records and automation of health information management functions.

HIT 104 Health Information and the Law 3 credits
Prerequisites: Program Advisor Approval. Presents the legal aspects of health records, health information, and the information department. Application of general principles of law and health information management to legal proceedings. Emphasis on patient privacy and confidentiality, types of consents, and proper release of health information.

HIT 105 Healthcare Organizations and Delivery Systems 3 credits
Prerequisites: HIT 102. Provides an overview of the organization of healthcare delivery, including the various types of healthcare institutions, accreditation standards, licensure and regulatory agencies, and payment and reimbursement systems. Emphasizes the maintenance of data accuracy, security, privacy, and confidentiality in manual and computerized information systems.

HIT 110 Pharmacology for Health Information Professionals 2 credits
Prerequisites: ANP 102 and HHS 101. Introduction to the application of pharmacology to the treatment of human diseases and disorders as it relates to the field of health information technology.

HIT 201 Reimbursement Systems 3 credits
Prerequisites: HIT 105. Presents data elements that apply to prospective payment systems. Enables student to gain knowledge of reimbursement systems and to identify issues and patient characteristics in meeting medical necessity guidelines.

HIT 202 Healthcare Data Literacy and Statistics 3 credits
Prerequisites: HIT 102 and MAT 115. Compilation and usage of various types of administrative and healthcare statistics including vital records. Includes an overview of the health information research process and the use of computers for data management.

HIT 203 ICD Coding 3 credits
Prerequisites: HIT 102 and HIT 110. Includes International Classification of Diseases (ICD) assignment and sequencing of codes in accordance with approved guidelines.

HIT 204 Quality Assessment and Improvement 2 credits
Prerequisites: HIT 105. Presents the history and development of quality assurance in various healthcare facilities. Includes quality assessment techniques, utilization management, risk management, credentialing, and medical staff services as related to health information management.

HIT 205 Organization and Supervision 2 credits
Prerequisites: HIT 105. Includes principles and practices essential to the efficient supervision and management of health information departments including planning, organizing, directing, and controlling health information processes, personal, finances, and space.

HIT 206 Pathophysiology I 3 credits
Prerequisites: HIT 110. Covers the etiology, treatment, pharmacology, and prognosis of diseases associated with body systems.

HIT 207 Health Information Externship I 1 credit
Prerequisites: Program Advisor Approval. Provides the student with the opportunity to apply acquired health information technical knowledge in healthcare settings.

HIT 208 Health Information Externship II 1 credit
Prerequisites: Program Advisor Approval. Provides the student with the opportunity to apply acquired health information technical knowledge in healthcare settings.

HIT 213 CPT Coding 3 credits
Prerequisites: HIT 102 and HIT 206. Introduces Current Procedural Terminology (CPT) coding as applied in facility and physician perspectives. Includes the general content, coding guidelines, and the role of CPT coding in healthcare reimbursement. Applies codes to basic medical and surgical services including the use of modifiers. Ethical coding and compliance issues are emphasized.

HIT 216 Pathophysiology II 3 credits
Prerequisites: HIT 206. Continuation of HIT 206 to cover the etiology, treatment, pharmacology, and prognosis of diseases associated with body systems.

HLT 125 Health Care Systems and Trends 3 Credits
Prerequisites: Demonstrated competency through appropriate assessment or earning a grade of "C" or better in ENG 025, ENG 032 and MAT 044. An introduction to the health care industry emphasizing the systems approach to health care and the current trends facing the industry. Gives special attention to managed care organizations.

HLT 225 Finance and Budgeting for Health Care 3 Credits
Prerequisites: ACC 101. Importance is placed on the development and use of departmental budgets. Financial statements will be used to project future expenses and revenues for an organization and/or department. Emphasizes the reimbursement process for a managed care environment and purchasing procedures.

HLT 226 Organizational Development In Health Care 3 Credits
Prerequisites: BUS 105 and HLT 125. Examines organizational structure in health care organizations, including traditional structures and re-engineering of the health care industry. Covers staff development, training, job analysis and design, and departmental staffing. Discusses medical ethics.

HMS 101 Introduction to Human Services 3 Credits
Prerequisites: Demonstrated competency through appropriate assessment or earning a grade of "C" or better in ENG 025 and ENG 032. Explores the history of human services, career opportunities, and the role of the human service worker. Focuses on target populations and community agencies designed to meet the needs of various populations.

HMS 102 Helping Relationship Techniques 3 Credits
Prerequisites: Demonstrated competency through appropriate assessment or earning a grade of "C" or better in ENG 025 and ENG 032. Provides opportunities to increase effectiveness in helping people. Examines the helping process in terms of skills, helping stages, and issues involved in a helping relationship. Second in a series of three introductory human services courses.

HMS 103 Interviewing and Assessment 3 Credits
Prerequisites: HMS 101 and HMS 102 or CRJ 101 and CRJ 103. Introduces and develops basic interviewing skills. Includes assessment strategies and treatment planning. Third in a series of three introductory human services courses.

HMS 104 Crisis Intervention 3 Credits
Prerequisites: Demonstrated competency through appropriate assessment or earning a grade of "C" or better in ENG 025 and ENG 032.

Provides beginning training for people who anticipate or are presently working with people in crisis situations.

HMS 105 Introduction to Correctional Rehabilitation Services 3 Credits
Prerequisites: HMS 101 or CRJ 101. Includes a study of crime and how society is affected.

HMS 106 Physiology of Aging 3 Credits
Prerequisites: Demonstrated competency through appropriate assessment or earning a grade of "C" or better in ENG 025 and ENG 032. Focuses on the physical changes and common pathologies associated with the aging process. Includes the psychological and social implications of changes for human behavior. Focuses on health promotion and disease prevention.

HMS 107 Human Services Topical Seminar 3 Credits
Prerequisites: Program Advisor Approval. Discusses topics of current interest in human services. Focuses on special interest projects for students in human services. Utilizes field trips, guest speakers, audiovisual activities and seminars.

HMS 108 Psychology of Aging 3 Credits
Prerequisites: PSY 101. Covers the major behavioral changes in adulthood and aging. Students explore their own feelings about aging as well as the attitudes of society.

HMS 109 Understanding Diversity 3 Credits
Prerequisites: Demonstrated competency through appropriate assessment or earning a grade of "C" or better in ENG 025 and ENG 032. Covers theories and models that enhance understanding of our diverse society. Provides content about differences and similarities in the experiences, needs, and beliefs of selected minority groups and their relationship to the majority group. These groups include, but are not limited to people of color, women, gay, lesbian, and bisexual persons. Analyzes the interrelationship of race, class, age, ethnicity, and gender on how these factors influence the social value regarding economic and social justice. Course content will be integrated through written assignments and presentations.

HMS 110 Women's Issues 3 Credits
Prerequisites: Demonstrated competency through appropriate assessment or earning a grade of "C" or better in ENG 025 and ENG 032. Major issues and social problems related to women through an interdisciplinary analysis of social institutions and movements for social change as they affect women. Focus is on 21st century trends in institutions such as the family, law, medicine, education and other social interaction.

HMS 112 Recreation for Special Populations 3 Credits
Prerequisites: Demonstrated competency through appropriate assessment or earning a grade of "C" or better in ENG 025 and ENG 032.

Studies the nature and etiology of impairments including developmental disabilities, mental illness, physical disabilities, and geriatrics and their potential impact upon an individual's ability to participate in recreational activities. Explores techniques needed to conduct a recreation program that allows successful participation by an individual with a disability.

HMS 113 Problems of Substance Abuse in Society 3 Credits
Prerequisites: Demonstrated competency through appropriate assessment or earning a grade of "C" or better in ENG 025 and ENG 032. Introductory course that provides basic information about the problems of alcohol and other drug abuse. Explores symptoms and effects of abuse and dependence on individuals, families, and society. Class can be used toward ICAADA certification.

HMS 114 Social Services in Long-Term Care 3 Credits
Prerequisites: None. Provides practical and useful information about aging and institutionalization. Focuses on the role of social services within the long-term care facility. Indiana State Department of Health State Certification requires 48 hours of attendance.

HMS 116 Introduction to Disabilities 3 Credits
Prerequisites: None. Provides background knowledge of the field of mental retardation/developmental disabilities and issues pertaining to the field.

HMS 117 Foundations of Direct Support Professionals 2 credits
Prerequisites: none. A broad overview of the major concepts associated with providing support to individuals with disabilities in the community. The curriculum meets state and federal guidelines for direct support staff training. Students successfully completing the course will receive a state sanctioned certificate.

HMS 120 Health and Aging 3 Credits
Prerequisites: Demonstrated competency through appropriate assessment or earning a grade of "C" or better in ENG 025 and ENG 032. Presents an overview of the physical changes and common pathologies associated with the aging process. Focuses on the psychological and social implication of such changes for human behavior. Throughout the course there is a focus on health promotion and disease prevention during the later years.

HMS 122 Youth and Family Treatment 3 Credits
Prerequisites: Demonstrated competency through appropriate assessment or earning a grade of "C" or better in ENG 025 and ENG 032. Designed to allow the student exposure to applications of theories and practical solutions to the challenges facing residential childcare workers. Introduction of the impact of cultural differences within the residential setting. Introduction to the job performance expectations

of residential childcare workers, including working with placing agencies and families of the residents in the facility.

HMS 123 Health and Wellness/Disabilities 3 credits
Prerequisites: none. Introduces the health and medical aspects of assisting people with disabilities. Upon completion, students should be able to identify and implement strategies to promote wellness and manage health conditions.

HMS 124 Activity Director Basic 6 Credits
Prerequisites: None. Explores the philosophy and investigates the development of therapeutic activity programs for older persons. Focuses on activities that will meet the individual's physical, social, and emotional needs.

HMS 126 Community Integration 3 Credits
Prerequisites: none. Introduces students to the knowledge, skills and attitudes necessary for a direct support professional to successfully support persons with developmental disabilities in inclusive community settings

HMS 127 Positive Personal Support 3 credits
Prerequisites: HMS 116. Designed for Direct Service Provide to help those with disabilities achieve independent living behaviors.

HMS 128 Disability Support Teams 3 credits
Prerequisites: HMS 117 and HMS 116. Introduces the student to the essential characteristics of an effective team as well as the strategies they can use to be an active member of the team.

HMS 130 Social Aspects of Aging 3 Credits
Prerequisites: Demonstrated competency through appropriate assessment or earning a grade of "C" or better in ENG 025 and ENG 032. Covers major theories and patterns of aging in American society. Covers social institutions and cultural factors that affect the aging process.

HMS 135 Love, Romance and Relationships 3 credits
Prerequisites: Demonstrated competency through appropriate assessment or earning a grade of "C" or better in ENG 025 and ENG 032. Examines the key elements of healthy relationships. Explores the main problems that damage relationships. Presents research findings on successful and unsuccessful relationships. Examines how couples can improve intimacy, romance, and emotional connection. Explores the impact of one's emotional and relationship history on current and future romantic relationships. Presents practical, scientific-based skills for improving relationships.

HMS 140 Loss and Grief 3 Credits
Prerequisites: Demonstrated competency through appropriate assessment or earning a grade of "C" or better in ENG 025 and ENG 032. Introductory course that provides practical and useful information for people who have experienced loss. Students have the opportunity to evaluate their own experiences and attitudes toward loss and grief.

HMS 200 Substance Abuse Internship   **4 credits**
Prerequisites: HMS 113, HMS 208, HMS 209, and HMS 210. Field work experiences in approved substance abuse services agency. The student will complete 60 hours under the supervision of an agency professional and a college faculty member. The classroom component will include small group discussion and analysis of the internship experience.

HMS 201 Internship I   **4 Credits**
Prerequisites: HMS 101, HMS 102, and HMS 103. The first of two fieldwork experiences in approved human service agencies. The student will complete 160 hours under the supervision of an agency professional and a college faculty member. The classroom component will include small group discussion and analysis of the internship experience.

HMS 202 Internship II   **4 Credits**
Prerequisites: HMS 201, HMS 205 and HMS 206. The second of two fieldwork experiences in approved human service agencies. The student will complete 160 hours under the supervision of an agency professional and a college faculty member. The classroom component will include small group discussion and analysis of the internship experience.

HMS 205 Behavior Modification/Choice Theory **3 Credits**
Prerequisites: HMS 103 or CRJ 255 and PSY 101. Advanced level course focusing on theories of behavioral and reality approaches. Develops understanding of terms and practical applications of the behavioral and reality approaches used in working with people.

HMS 206 Group Process and Skills   **3 Credits**
Prerequisites: HMS 101, HMS 102 and HMS 103. Studies group dynamics, issues and behavior. Includes group functioning and leadership, guidelines on working effectively with a co-leader, and practical ways of evaluating the group processes.

HMS 207 Program Planning and Policy Issues   **3 Credits**
Prerequisites: HMS 101, HMS 102, HMS 103 and demonstrated competency through appropriate assessment or earning a grade or "C" or better in MAT 044. Concentrates on the components of administration of human service agencies. Addresses practitioner skills needed by an administrator or supervisor. Discusses social policy and its impact on human services.

HMS 208 Treatment Models of Substance Abuse   **3 Credits**
Prerequisites: HMS 113. Describes the various treatment models used with chemically dependent clients. Discussion centers on intervention and treatment models for chemical dependency and their role in the recovery process. Course can be applied toward hours for ICAADA certification.

HMS 209 Counseling Issues in Substance Abuse   **3 Credits**
Prerequisites: HMS 113. Explores practice strategies for the worker who counsels chemically dependent clients. Course can be applied toward hours for ICAADA certification.

HMS 210 Issues of Substance Abuse in Family Systems   **3 Credits**
Prerequisites: HMS 113. Introduction to the characteristics and dynamics of families, couples, and significant others affected by substance abuse. Examines models of intervention and engagement in the treatment and recovery process. Explores the interaction between the family system and substance use behaviors.

HMS 212 Family and Child Welfare   **3 Credits**
Prerequisites: HMS 101. Examines contemporary problems facing families and children. Evaluates the adequacy of policies, programs, and services in the context of changing lifestyles and social forces impacting the quality of life.

HMS 215 Juvenile Delinquency   **3 Credits**
Prerequisites: HMS 101 or CRJ 105. Provides an overview of the concepts, definitions, and measurements of juvenile delinquency. Explores various theories that attempt to explain the causes of delinquency. Looks at the role of environmental influences (peers, gangs, school, drugs) as they contribute to delinquency. Discusses an overview of the history and philosophy of the juvenile justice system as well as ways to control and treat juvenile delinquents.

HMS 220 Issues and Ethics in Human Services   **3 Credits**
Prerequisites: HMS 101, HMS 102 and HMS 103. Advanced level course provides an overview of legal and ethical aspects in the field of human services with implications for the human service worker. Includes topics such as confidentiality, rights of clients, client records, equal protection for staff and clients, and discrimination. The Human Service Ethical Code and related codes are covered with an overview of ethical dimensions of practice.

HMS 279 Human Services Social Work Bridge Course   **1 Credit**
Prerequisites: HMS 201. Orientation to the profession of social work. Course addresses origins, ethics, accreditation, theoretical foundations, fields of social work, populations served and diversity. Course builds on material already covered in HMS 101: Introduction to Human Services. Course will meet both at Ivy Tech and the related I.U. campus. Course will provide an orientation to I.U. and the School of Social Work.

HMT 100 OSHA Regulations   **3 Credits**
Prerequisites: None. This course provides a study of the U. S. Occupational Safety and Health Administration's (OSHA) regulations that pertain to protecting workers from exposure to occupational hazards. Students concentrate on researching, interpreting, summarizing, and applying the OSHA regulations.

HMT 200 EPA Regulations   **3 Credits**
Prerequisites: None. This course provides a detailed study of the U. S. Environmental Protection Agency (EPA) regulations pertaining to hazardous waste management, with an emphasis on the requirements of the Resource Conservation and Recovery Act of 1976, the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 and the Superfund Amendments and Reauthorization Act of 1986.

HMT 201 Contingency Planning   **3 Credits**
Prerequisites: None. How to develop an emergency response contingency plan for a facility or community. Preparedness includes analyzing the hazards, writing and implementing the contingency plans, training employees for an emergency, and evaluating the effectiveness of the contingency plan.

HMT 203 Sampling Procedures   **3 Credits**
Prerequisites: None. A variety of sampling procedures used in industrial settings for emergency response. Topics to be covered include: sampling and monitoring devices, industrial hygiene monitoring, water and waste stream monitoring, outside air sampling, soil and radiation sampling. Emphasis will be placed on collecting and preserving representative samples, interpreting laboratory results, and on complying with relevant federal regulations.

HMT 205 DOT Regulations   **3 Credits**
Prerequisites: HMT 100. A detailed study of the U. S. Department of Transportation (DOT) regulations. Students shall be introduced to certain Nuclear Regulatory Commission and Environmental Protection Agency regulations pertinent to hazardous materials transportation.

HMT 220 Hazardous Materials Recovery, Incineration and Disposal   **3 Credits**
Prerequisites: HMT 100. The methods of recovery, incineration and/or disposal of hazardous waste. Topics include contracting qualified disposal organizations, obtaining permits and ensuring regulatory compliance of hazardous waste. Topics include contracting qualified disposal organizations, obtaining permits and ensuring regulatory compliance of hazardous waste.

HOS 101 Sanitation and First Aid   **3 Credits**
Prerequisites: Demonstrated competency through appropriate assessment or earning a grade of "C" or better in ENG 025, ENG 032, and MAT 044. This course will help students learn basic principles of sanitation and safety in order to maintain a safe and healthy food service environment. It presents laws and regulations related to

safety, fire, and sanitation and how to adhere to them in the food service operation.

HOS 102 Basic Food Theory and Skills 3 Credits
Prerequisites: None. Corequisites: HOS 101. Fundamentals of food preparation, service procedures, and safety practices in the food service industry including proper operation techniques for equipment. This course also provides a background and history of the hospitality industry and introduces the student to the broad spectrum of hospitality/food service organizations and career opportunities. Students will be familiarized with the organizational structure and basic functions of departments.

HOS 103 Soups, Stocks, and Sauces 3 Credits
Prerequisites: HOS 101 and HOS 102. How to prepare the four major stocks, the five mother sauces (in addition to smaller sauces) and various soups. Additional emphasis is placed on the further development of the classical cooking methods.

HOS 104 Nutrition 3 Credits
Prerequisites: Demonstrated competency through appropriate assessment or earning a grade of "C" or better in ENG 025, ENG 032 and MAT 044. The characteristics, functions and food sources of the major nutrient groups and how to maximize nutrient retention in food preparation and storage. Students will be made aware of nutrient needs throughout the life cycle and to apply those principles to menu planning and food preparation.

HOS 105 Introduction to Baking 3 Credits
Prerequisites: None. Corequisites: HOS 101. Fundamentals of baking science, terminology, ingredients, weights and measures, and proper use and care of equipment. Students will produce yeast goods, pies, cakes, cookies, and quick breads.

HOS 106 Pantry and Breakfast 3 Credits
Prerequisites: HOS 102 and HOS 105 The techniques and skills needed in breakfast cookery as well as insight into the pantry department. Various methods of preparation of eggs, pancakes, waffles and cereals will be discussed. Students will receive instruction in salad preparation, salad dressing, hot and cold sandwich preparation, garnishes and appetizers.

HOS 108 Human Relations Management 3 Credits
Prerequisites: Demonstrated competency through appropriate assessment or earning a grade of "C" or better in ENG 025, ENG 032, and MAT 044. The necessary skills for proper recruiting, staffing, training, and management of employees at various levels. The course will help prepare the student for the transition from employee to supervisor. Additionally, it will help the student evaluate styles of leadership, and develop skills in human relations and personnel management.

HOS 110 Meat Fabrication 3 Credits
Prerequisites: HOS 101 and HOS 102. An in-depth look at meats and poultry. An emphasis will be placed on recognizing and understanding meat types and cuts to allow them to be well and profitably prepared/cooked. The course will provide discussion of grading and inspection, basic cuts, purchasing and receiving, aging, classification, and appropriate cooking and storage methods. The student will be responsible for the fabrication of meats and poultry for final preparation.

HOS 111 Yeast Bread I 3 Credits
Prerequisites: HOS 105. The first of two courses which prepare students to produce a variety of yeast-raised breads and rolls using both straight dough and sponge dough methods. The course emphasizes proper mixing, fermentation, make-up proofing, and baking.

HOS 112 Yeast Bread II 3 Credits
Prerequisites: HOS 111. To advance the student in proficiency in the production of artisan yeast-raised products from around the world. The ingredients, methods, and equipment utilized in the production of these products will be emphasized.

HOS 113 Baking Science 3 Credits
Prerequisites: HOS 105. To help students understand the science of baking and the different reactions that take place based on the ingredients, temperatures, and equipment in relation to the final product.

HOS 114 Introduction to Hospitality 3 Credits
Prerequisites: Demonstrated competency through appropriate assessment or earning a grade of "C" or better in ENG 025, ENG 032 and MAT 044. Developing an understanding of the hospitality industry and career opportunities, and responsibilities in the food service and lodging industry. Introduces procedures for decision making which affects operation management, products, labor, and revenue.

HOS 115 Diet Therapy 4 Credits
Prerequisites: Demonstrated competency through appropriate assessment or earning a grade of "C" or better in ENG 025, ENG 032, and MAT 044. The basic principles of nutrition; the role nutrients play in maintaining good health as well as their affect on certain disease states. Students will learn to modify diets to meet various nutritional needs and to plan menus using modified diet principles.

HOS 116 Dietary Management I 4 Credits
Prerequisites: Demonstrated competency through appropriate assessment or earning a grade of "C" or better in ENG 025, ENG 032 and MAT 044. The basic principles of management and supervision. The course is designed to teach skills necessary to goals of a person wishing to become a dietary manager.

HOS 117 Dietary Management II 4 Credits
Prerequisites: Demonstrated competency through appropriate assessment or earning a grade of "C" or better in ENG 025, ENG 032 and MAT 044. The basic principles of management and supervision for the dietary professional. Skills learned through this course and included practice are applicable to management level positions.

HOS 118 Resident Clinical Assessment Practicum 4 Credits
Prerequisites: HOS 117. Developing an in-depth understanding of the principles of diet therapy. Students will learn to assess patients' nutritional needs, develop care plans, and implement a delivery system. Students will also learn documentation skills required by HCFA.

HOS 144 Travel Management 3 Credits
Prerequisites: Demonstrated competency through appropriate assessment or earning a grade of "C" or better in ENG 025, ENG 032, and MAT 044. A systematic overview of the travel industry. The class provides comprehensive and critical information on a broad range of travel services, products, and issues.

HOS 171 Introduction to Convention/Meeting Management 3 Credits
Prerequisites: Demonstrated competency through appropriate assessment or earning a grade of "C" or better in ENG 025, ENG 032, and MAT 044. A comprehensive understanding of the convention/meeting management industry including the roles of various service providers, space requirements, and uses of convention facilities.

HOS 172 The Development and Management of Attractions 3 Credits
Prerequisites: Demonstrated competency through appropriate assessment or earning a grade of "C" or better in ENG 025, ENG 032 and MAT 044. The process of developing visitor attractions and provides for a discussion of the issues involved in their management.

HOS 201 Hospitality Purchasing and Cost Control 3 credits
Prerequisites: MAT 111, MAT 112, or MAT 118. Presents the essentials of effective food and beverage control while establishing systems for sale values of food and beverages that are outlined. This course addresses the application of the four-step control process to the primary phases of foodservice operations: purchasing, receiving, storing, issuing and production. Labor costs and sales forecasting are analyzed.

HOS 202 Fish and Seafood 3 Credits
Prerequisites: HOS 101, HOS 102 and HOS 103. Emphasizes the importance of fish and seafood in today's market. The student will become familiar with the different varieties and characteristics of fish and seafood. Students will learn the basic principles of structure, handling, and cooking to utilize the many varieties of seafood in a sys-

thematic way. The course will cover proper buying, storage, preparation and merchandising of fish and seafood. The course provides hands-on experience in boning, cutting, and cooking methods appropriate for seafood.

HOS 203 Menu, Design and Layout 2 Credits
Prerequisites: HOS 201. Applying the principles of menu planning, pricing, and layout to the development of menus for a variety of types of facilities and service. The major project will be to develop a menu, design and layout of a hospitality facility.

HOS 207 Table Service 3 Credits
Prerequisites: HOS 101 and HOS 102. Provides students with practical knowledge and skills of restaurant operations. Knowledge and appreciation of the relationship between "front" and "back" of the house is emphasized through operation of an actual food service environment. Quality of service is emphasized through management of the guest experience. Additional course work will include tableside cookery and the study of beverages and wines.

HOS 208 Cakes, Icings, and Fillings 3 Credits
Prerequisites: HOS 105. Requires students to produce and finish a variety of cakes. The course emphasizes application techniques, color coordination, and the flavor and texture of fillings. Students will practice the techniques of basic cake decorating.

HOS 209 Advanced Decorating and Candies 3 Credits
Prerequisites: HOS 208. The second in a series in decorating techniques and candy making. Students will construct classical and contemporary candy products including centerpieces and/or showpieces made with selected confectionery mediums.

HOS 210 Classical Cuisine 3 Credits
Prerequisites: Program Advisor Approval. Presents advanced and sophisticated classical culinary methods following the principles and techniques of Escoffier. Students will advance cooking techniques, timing, and presentation and learn history and terms pertaining to classical foods and menus with emphasis on French cuisines.

HOS 211 Specialized Cuisine 3 Credits
Prerequisites: HOS 106, HOS 110, and HOS 207. Students will be introduced to foods from various cultures. Students will gain a sense of the history of foods from various countries as well as develop skills in preparation of these foods. Students will advance skills in table service as well as tableside preparation.

HOS 212 Garde Manger 3 Credits
Prerequisites: HOS 106. Helps students develop skills in producing a variety of hot - served cold food products as it relates to the garde manger area. Students will prepare items appropriate for buffet presentation, including decorative pieces such as tallow and ice sculptures.

HOS 213 Classical Pastries and Chocolates 3 Credits
Prerequisites: 30 hours of program studies including HOS 105. This course address classical French and European desserts, including the preparation of goods such as Napoleons, Gateau St. Honoré, petit fours and petit fours sec, ganaches, pastry creams and fillings, sauces, flans and tarts, and European sponges. The course also includes instruction in tempering of chocolates, molding, and chocolate plastique, preparation of truffles, pastilage and marzipan, short doughs, and meringues. The student will be instructed in the latest preparation methods, innovative ideas for impressive plate presentations, and techniques that utilize specialized equipment and tools to make high-tech, novelle creations.

HOS 215 Front Office 3 Credits
Prerequisites: HOS 114 and MKT 101. Presents a systematic approach to front offi ce procedures, detailing the flow of business through a hotel beginning with the reservation process and ending with billing and collection procedures within the context of the overall operation of a hotel. Students will examine front office management, the process of handling complaints and concerns regarding hotel safety and security. Students will become involved in the processes for forecasting future business, sales, and rate structure of the hotel as well as methods for budgeting hotel finances for success.

HOS 217 Housekeeping 3 Credits
Prerequisites: HOS 114 and MKT 101. Introduces the fundamentals of housekeeping operations. Emphasis is placed on employee development, management skills, OSHA standards and property maintenance and up-keep. Budgeting, cost controls, proper staffing and planning a fiscal budget are also emphasized in this course.

HOS 221 Catering Administration 3 Credits
Prerequisites: Program Advisor Approval. Provides instruction in the fundamentals of catering; including the business of supplying food, goods, and organized service for public and private functions. Subjects to be covered include safety, equipment, transportation, contracting, special arrangements, beverage service and menu planning. Students will practice techniques of setting up banquets and buffets. Students are required to plan, budget, cost, test recipes and formats, plan décor, service and entertainment for catered events.

HOS 270 Bakery Merchandising 3 Credits
Prerequisites: HOS 112. Education and practice in merchandising techniques with an emphasis on the baking and pasty field. The majority of a student's time will be spent in all pertinent phases of retail bakeshop operation or in the field observing merchandising in action.

HOS 271 The Mechanics of Meeting Planning 3 Credits
Prerequisites: HOS 171. An in-depth examination of the meetings and conventions industry, this class will focus on the operational aspects of the various industry segments and the intra-industry interactions of each. The course will provide an in-depth study and application of the techniques used for successful meetings, conventions and expositions. The text used is one of the main components used to study for the Certified Meeting Professional (CMP) examination — the highest level of expertise in meetings management. Class activity will help prepare the student for the CMP examination.

HOS 272 The Tourism System 3 Credits
Prerequisites: Demonstrated competency through appropriate assessment or earning a grade of "C" or better in ENG 025, ENG 032 and MAT 050. Designed to develop an understanding of travel trends and modes and the social, environmental, and economic impact on destination areas. The course explores major concepts in tourism, what makes tourism possible, and how tourism can become an important factor in the wealth of any nation. Emphasis is given to local, regional, and national tourism.

HOS 280 Co-op/Internship 3 Credits
Prerequisites: Program Advisor Approval. A practical experience in a commercial/non-commercial foodservice or hotel establishment in order to build specialized skills. This work-based experience provides an opportunity for students to transfer their academic preparation into actual work-based learning by acquiring "real world" skills and building ties with the business/professional community. (Students should have a site in mind prior to registering for this course—coordinator will assist.)

HPR 205 Structural Kinesiology 3 credits
Prerequisites: Demonstrated competency through appropriate assessment or earning a grade of "C" or better in ENG 025, ENG 032 and MAT 044. Fundamental concepts concerning the interaction of biological and mechanical aspects of the musculoskeletal and neuromuscular structures. Emphasis on practical application to study and teaching of skilled human movement. Laboratory sessions focus on anatomy of the musculoskeletal system with application to human movement in sport, physical education, and daily activities.

HPR 211 Introduction to Sport Management 3 credits
Prerequisites: Demonstrated competency through appropriate assessment or earning a grade of "C" or better in ENG 025, ENG 032 and MAT 044. An examination of the broad spectrum of career opportunities available in the sport management profession. Includes career planning, sport management terminology, and an overview of specific skills and courses required for professional preparation in sport management. Fundamental aspects of the management functions as each relates to sport and fitness organizations. A preliminary investigation of managerial roles and skills, and their effects on interpersonal, group, and organizational relationships.

HPR 212 Introduction to Exercise Science 3 credits
Prerequisites: Demonstrated competency through appropriate assess-

ment or earning a grade of "C" or better in ENG 025, ENG 032 and MAT 044. An introduction to the science of exercise and human movement. Special topics in exercise physiology, sport biomechanics, sports medicine, and motor integration.

HPR 216 Current Concepts in Physical Fitness   3 credits
Prerequisites: Demonstrated competency through appropriate assessment or earning a grade of "C" or better in ENG 025, ENG 032 and MAT 044. Introduction to physical fitness and the role of exercise in health and wellness. Understanding the concepts, principles, and guidelines for fitness exercise and related activities. Use of physical fitness assessment data to plan and carry out a personal fitness program.

HSY 101 Survey of American History I
TransferIN 3 Credits
Prerequisites: Demonstrated competency through appropriate assessment or earning a grade of "C" or better in ENG 025 and ENG 032. Covers major themes and events in history including exploration of the New World; the colonial period; causes and results of the American Revolution; the development of the federal system of government; the growth of democracy; early popular American culture; territorial expansion; slavery and its effect; reform movements, sectionalism; causes and effects of the Civil War.

HSY 102 Survey of American History II
TransferIN 3 Credits
Prerequisites: Demonstrated competency through appropriate assessment or earning a grade of "C" or better in ENG 025 and ENG 032. Cover major themes including the post Civil War period, western expansion, industrial growth of the nation and its effects, immigration and urban discontent and attempts at reform, World War I, the Roaring Twenties, social and governmental changes of the thirties, World War II and its consequences, the growth of the federal government, social upheaval in the sixties and seventies, and recent trends in conservatism, globalization, and cultural diversity.

HSY 125 History of American Technology   3 Credits
Prerequisites: Demonstrated competency through appropriate assessment or earning a grade of "C" or better in ENG 025 and ENG 032. Examines the technological development of the United States. Emphasis will be given not only to the inventions themselves but the reasons why such technology was needed and what influence the technology has had on American society.

HSY 235 World Civilization I   3 Credits
Prerequisites: Demonstrated competency through appropriate assessment or earning a grade of "C" or better in ENG 025 and ENG 032. Presents the key individuals, events and schools of thought, which have most greatly impacted societal development and world history up to 1650. The target civilizations of study include Oriental, the

Middle East, Western Europe, Africa, and the Americas. Discusses the political, economic, social and cultural evolution of human civilization.

HSY 236 World Civilization II   3 Credits
Prerequisites: Demonstrated competency through appropriate assessment or earning a grade of "C" or better in ENG 025 and ENG 032. Presents the key individuals, events and schools of thought, which have most greatly impacted societal development and world history since 1500. Key movements and events of the periods will be studied. Discusses the political, economic, socialand cultural evolution of civilization.

HUM 100 Theatre Appreciation   TransferIN 3 Credits
Prerequisites: Demonstrated competency through appropriate assessment or earning a grade of "C" or better in ENG 025 and ENG 032. Developing understanding, appreciation and critical perceptions of the theatrical event. The course will approach theatre as an art form, an entertainment medium and as a vehicle for self-expression. Emphasis will be placed on the history of theatre, acting, directing, playwriting, theatre technology, costume design, scenic design, and lighting design. Active participation in the playwriting, acting, directing and designing processes will be provided. The course will also require attendance at theatrical events to offer firsthand experience in theatre arts.

HUM 117 Introduction to Music Theory   3 Credits
Prerequisites: Demonstrated competency through appropriate assessment or earning a grade of "C" or better in ENG 025 and ENG 032. Emphasizes the practical learning of basic music skills and will cover fundamental music terminology, notation and structure. Sight singing and listening skills will also be developed through examples drawn from a wide variety of musical styles.

HUM 118 Music Appreciation   TransferIN 3 Credits
Prerequisites: Demonstrated competency through appropriate assessment or earning a grade of "C" or better in ENG 025 and ENG 032. Introduces the student to music with an emphasis on critical listening. Surveys a variety of genres, composers and their compositions. No previous background in music required.

HUM 201 Introduction to Humanities I   3 Credits
Prerequisites: ENG 111. Introduces the student to a wide variety of unique creations of the individual imagination. The overall purpose of the course is to deepen and broaden the student's enjoyment of the humanistic disciplines at both the level of feeling and the level of understanding from pre-history to the Renaissance.

HUM 202 Introduction to Humanities II   3 Credits
Prerequisites: ENG 111. Introduces the student to a wide variety of unique creations of the individual imagination. The overall purpose of the course is to deepen and broaden the student's enjoyment of the

humanistic disciplines at both the level of feeling and the level of understanding from the Renaissance to the present.

IDS 110 Basic Carpentry and Building Maintenance   3 Credits
Prerequisites: None. Includes carpentry basics, power tool and hand tool safety and use, framing, trim, hanging doors and windows, installing cabinets and counter tops, screen repair, lock replacement, cutting keys, drywall basics, painting, basic masonry, an overview or floor and wall coverings, environmental concerns such as lead-based paint, asbestos and radon, and basic architectural blueprint reading.

IDS 120 Basic Carpentry and Building Maintenance   3 Credits
Prerequisites: None. Includes carpentry basics, power tool and hand tool safety and use, framing, hanging doors and windows, trim basics, drywall basics, and painting basics.

IDS 122 General Maintenance   3 Credits
Prerequisites: None. Covers required record keeping, plumbing basics (fixture repair and replacement, piping, basic plumbing code, etc.), major appliance installation and repair, chemical usage and storage, MSDS files, ADA compliance and safety and liability topics.

IMT 105 Heating and Air Conditioning Basics   3 Credits
Prerequisites: None. Presents fundamentals of heating and compression systems used in mechanical refrigeration. Includes combustion process, heat flow, temperature measurement, gas laws, heating and refrigeration cycles and components used in systems.

IMT 106 Millwright I   3 Credits
Prerequisites: Demonstrated competency through appropriate assessment or earning a grade of "C" or better in MAT 044. Introduces the proper use of hand and power tools and measuring instruments in carpentry, blacksmithing, rigging and equipment, machinist and general shop. Includes structural steel and fabricating terms.

IMT 107 Preventative Maintenance   3 Credits
Prerequisites: None. Introduces the major purpose of preventive maintenance: to save time and to cut costs. The course will study goals such as, reducing losses, improving product quality, boosting production efficiency, and increasing profits. Includes an introduction to sound planning, effective scheduling, competent inspection, control and actions at the worksite, and follow-up reporting. Lab projects will be designed to organize materials, tool control, transportation of equipment, sizing up labor requirements.

IMT 108 Measure and Calibration   3 Credits
Prerequisites: MIT 113. Provides instruction in the purpose, function and application of oscilloscopes and related instruments.

IMT 110 Coupling and Alignment   **3 Credits**
Prerequisites: Demonstrated competency through appropriate assessment or earning a grade of "C" or better in MAT 044. Introduces the concepts of correct alignment of industrial process machinery. Provides instruction in troubleshooting and repair of coupled machines.

IMT 111 Rigging   **3 Credits**
Prerequisites: None. Introduces the proper techniques of moving industrial machinery and equipment. Emphasis is placed on proper installation, inspection, safety requirements, and load calculations.

IMT 112 Sheet Metal Layout and Design   **3 Credits**
Prerequisites: Demonstrated competency through appropriate assessment or earning a grade of "C" or better in MAT 040. Examines the procedures used to layout sheet metal components. Presents the proper use of hand and machine tools to fabricate sheet metal projects.

IMT 121 Industrial Safety   **3 Credits**
Prerequisites: None. Introduces occupational safety and health standards and codes with emphasis on applications of codes to typical work situations and MSDS requirements. Includes emergency first aid, safety protection, eye protection and chemicals handling. Covers employer and employee rights as well as violations, citations, penalties, variances, appeals and record keeping.

IMT 122 Electrical Wiring Fund   **3 Credits**
Prerequisites: MIT 113. Introduces the student to the National Electrical Code and its application in designing and installing electrical circuits, selecting wiring materials and devices, and choosing wiring methods. Includes electrical safety, terminology, interpretation of electrical symbols used in construction blueprints, branch circuit layout, over current protection, conductor sizing, grounding, GFCI & AFCI protection, tool usage, and material/device selection.

**IMT 201 Fluid Power Systems
(Hydraulics/Pneumatics)**   **3 Credits**
Prerequisites: MIT 104. Introduces the student to more complex fluid power circuits. Requires students to design, analyze and troubleshoot complex circuits using schematic diagrams. Studies detailed construction of typical industrial fluid power components. Teaches students to disassemble and evaluate fluid power components in the lab.

IMT 203 Machine Maintenance/ Installation   **3 Credits**
Prerequisites: Demonstrated competency through appropriate assessment or earning a grade of "C" or better in MAT 044. Examines the procedures for the removal, repair and installation of machine components. The methods of installation, lubrication practices, and maintenance procedures for industrial machinery are analyzed. Also presented are the techniques involved in the calibration and repair of

mechanical devices and the practice in computations pertaining to industrial machinery.

IMT 207 Electrical Circuits   **3 Credits**
Prerequisites: MIT 113. This course is designed to provide an understanding of circuits using alternating current and the motor operation. Provides fundamentals of single- and three-phase alternating current. Analysis of series and parallel circuits, containing resistance, inductance, and capacitance will be covered. Transformer applications both single phase and three-phase along with power distribution will be covered. This course will give each student a general understanding of common types of electric motors, extending from the small shaded pole fan motors to the large three-phase motors. Direct current motors will also be covered. The student will receive an education in motor theory, magnetism and how it affects motor rotation, and how capacitors affect a motor circuit will be included.

IMT 210 Pumps   **3 Credits**
Prerequisites: MIT 104. Covers the construction and operation of centrifugal, reciprocating, metering, special, and rotary pumps and their components. Includes procedures of troubleshooting, installation and maintenance.

IMT 211 Advanced Industrial Mechanics I   **3 Credits**
Prerequisites: IMT 203. Examines the operation and design of mechanical systems including belt drives, chain drives, gearboxes, and bearings. Includes the proper use of portable tools and the study of different metals.

IMT 212 Advanced Industrial Mechanics II   **3 Credits**
Prerequisites: IMT 203 and MIT 103. Teaches advanced mechanical maintenance skills which specifically include vibration analysis, laser shaft alignment, lubrication oil analysis, pumps, seals, gaskets, and couplings. Half of the semester is devoted to teaching the basics of heating and air conditioning.

IMT 213 Pipe Fitting Basics   **3 Credits**
Prerequisites: MIT 102 or CON 106. Acquaints the maintenance technician with a basic foundation and pipe fitting skills necessary to make repairs or layout new pipe. Includes determination of the type and quantity of material needed to complete a task and joining those materials in the proper manner with a minimum of supervision.

IMT 215 Power Plant Mechanics   **3 Credits**
Prerequisites: IMT 207 and MAT 111. Presents the basic elements in the power plant, the function, their mode of operation, and the mechanics, with emphasis on the construction and repair of power plant mechanics. The student selects, troubleshoots, and repairs power plant mechanics.

IMT 216 Industrial Automation   **3 Credits**
Prerequisites: IDS 105, IMT 207 and TEC 104. Covers the field of industrial automation. Introduces the principles of control systems both analog and digital based. Covers instrumentation and sensors; position, speed, thermal, pressure, flow, and level. Develop an understanding of analog and digital signal conditioning as applied to automated systems. Covers the principles of process controllers both analog and digital. Understand control loop characteristics and tuning.

IMT 217 Advanced Motor Drives   **3 Credits**
Prerequisites: MIT 103 and IDS 105. Covers the field of industrial motor drives, dc, ac, servo and stepper motors. Introduces students to variable voltage dc drives and variable frequency ac drives. Topics covered will include installation, setup, maintenance, and trouble-shooting of drive systems.

INT 101 Design Theory   **3 Credits**
Prerequisites: None. Introduces theory and color dynamics as applied to compositional design. Includes exploration and application of three-dimensional concepts, human factors and the psychology and social influences of space.

INT 102 Drafting and Construction   **3 Credits**
Prerequisites: None. Provides an understanding of building structures, residential construction techniques, building materials and blueprint reading. Includes building codes and the preparation of plans, elevations, sections, and details as they relate to construction drawings.

INT 103 Introduction to Interior Design   **3 Credits**
Prerequisites: None. An introductory course, which provides students with an overview of the field of interior design. Exercises include small scale space analysis and functional planning based on user needs, application of the principles of design, furniture arrangement and selection, interior finish considerations and presentation techniques.

INT 104 Textiles for Interiors   **3 Credits**
Prerequisites: None. An intensive study of textiles from fiber identification and classification to finish. Also introduces the study of interior textile fabrications including window treatments, upholstery, carpet and wall coverings.

INT 105 Design Presentations   **3 Credits**
Prerequisites: INT 102. Presents the elements of two- and three-dimensional representational drawings and design concepts. Studies include basic drawing, drafting and perspective techniques; color rendering, material board preparation and client presentation.

INT 108 Interior Design II   **3 Credits**
Prerequisites: INT 102 and INT 103 and INT 105. Presents concept development, programming and space planning of the interior environment. Exercises reinforce creativity and problem solving skills. Emphasizes the relationship between individuals and their surround-

ings, including studies in human scale, proxemics and design considerations for special populations.

INT 109 History of Interiors I   **3 Credits**
Prerequisites: Demonstrated competency through appropriate assessment or earning a grade of "C" or better in ENG 025 and ENG 032. Survey of the development of the interrelationship of architecture, interiors, furniture, and decorative arts from antiquity through the ages.

INT 200 Lighting and Building Systems   **3 Credits**
Prerequisites: INT 102 and INT 216. Presents the integration of commercial and institutional interior design and architectural detailing. Includes the impact of mechanical and electrical systems, acoustics and codes. Special emphasis will be placed on lighting technology and application.

INT 201 Interior Materials   **3 Credits**
Prerequisites: Demonstrated competency through appropriate assessment or earning a grade of a "C" or better in MAT 044. Examines the physical properties and characteristics of various furniture and decorative materials, finishes, and architectural detailing including floor and wall treatments. Addresses environmental issues and problems in specifying, estimating, and installing these materials.

INT 202 Contract Design   **3 Credits**
Prerequisites: INT 216 and INT 108. Studies include commercial technological and base building requirements, barrier-free, building and life safety codes, analysis of existing conditions, client interview, and square footage and space planning standards. Emphasis is on task analysis and workstation design, systems and equipment manufacturers and finish selections within the office.

INT 203 Professional Practice   **3 Credits**
Prerequisites: INT 103 or GDN 114. Introduction to business principles and practices as they relate to the environmental design profession. Includes business formation and management, professional ethics and organizations, certification and licensing, design liability and project management. Special topics involving consumer behavior, sales techniques and fee structuring will also be addressed.

INT 204 Interior Design III   **3 Credits**
Prerequisites: Program Advisor Approval. Students will research and develop creative project solutions for commercial interiors in visual merchandising, hospitality, adaptive reuse and special population projects. Students will define, research, and develop a program for an advanced design problem including concept development, space planning, all necessary working drawings and specifications and appropriate presentation materials.

INT 209 Portfolio Preparation/Internship   **3 Credits**
Prerequisites: Program Advisor Approval. Efforts are directed toward achieving a career in environmental design. Includes a comprehensive program assessment exam, the development of a quality portfolio and resume, and necessary field experience.

INT 211 Kitchen and Bath Design   **3 Credits**
Prerequisites: INT 102 and INT 201. Involves the requirements and space planning for kitchens and baths, utilizing both standard and custom cabinetry and fixtures. Topics also include casework for media and conference centers.

INT 212 Historic Preservation   **3 Credits**
Prerequisites: INT 102 and INT 109. Introduces the process of establishing historic properties. Preservation, restoration and adaptive reuse will be differentiated as applied to both public and private properties. Includes appropriate exterior and interior color and finish selections, and architectural detailing.

INT 216 CAD for Environmental Designers   **3 Credits**
Prerequisites: INT 102. Introduces fundamentals of CAD (Computer-Aided Drafting) for environmental graphics. Includes overview of CAD and systems, use of software and plotter applications. Each student will complete an individual project by the end of the semester.

INT 217 Visual Merchandising   **3 credits**
Prerequisites: None. Presents students with a survey of the many elements of visual merchandising and display currently used in retail design and decorative accessorization to attract customers. Students are introduced to the principles of retail space planning, fixture arrangement and the display equipment required in visual merchandising including fixtures, mannequins, signage, lighting and props. Includes research in marketing, color psych, and lighting. Field trips and hands-on projects are an integral part of the course.

INT 223 History of Interiors II   **3 Credits**
Prerequisites: INT 109 or ARH 101. An in-depth exploration of the movements in architecture and interior design from the late 19th century to the present.

INT 224 Travel Study   **3 Credits**
Prerequisites: Program Advisor Approval. Offers the student an opportunity to study the culture and history of another region, with an emphasis on art, architecture, interior and garden design. Includes pre-trip meetings and lectures, trip journals and summary papers.

INT 241 Faux Finishing: Basic Glazing Techniques 1 credit
Prerequisites: None. Presents the basics in a variety of glazing techniques and wall finishes including traditional and contemporary single and multi-colored wall glazing. Proper pigment selection, surface preparation, and handling of the materials will be discussed and demonstrated.

INT 242 Faux Finishing: Italian Plasters   **1 credit**
Prerequisites: None. Introduces the traditional Italian plaster finishes. Learn how to replicate and incorporate the beautiful textures of the Old World into the modern setting. The history of lime-based plasters and the interior decorative arts will be discussed.

INT 243 Faux Finishing: Patterns and Stenciling 1 credit
Prerequisites: None. Introduces the use of stencils and hand painted patterns that will repeat and match perfectly. Learn techniques to cut patterns and to paint them on the wall or furniture pieces.

INT 244 Faux Finishing: Advanced Glazing Techniques   **1 credit**
Prerequisites: INT 241. Presents the latest trends in advanced glazing techniques and wall finishes. Students will explore in-depth an advanced level of faux and decorative finishing while building proficiency in both techniques and product knowledge.

INT 245 Faux Finishing: Painted Furniture and Decorative Accessories   **1 credit**
Prerequisites: INT 241. Covers the techniques of creating unique, one-of-a-kind painted furniture and decorative accessories pieces. Students will learn how to create a variety of professional finishes including multi-layered painted and wood-toned finishes that are suitable over raw wood, pre-existing finishes and painted base coats.

INT 246 Faux Finishing: Floors and Floor Coverings   **1 credit**
Prerequisites: INT 243. Building on the skills acquired in the INT 243 course, students will learn the processes and materials required to create faux floor finishes and floor coverings. Instruction will be given in color, design, painting and finishing techniques. Each student will make one 5' x 8' floor cloth.

INT 247 Faux Finishing: Frescoes and Murals   **1 credit**
Prerequisites: ART 120 or INT 105. Applies basic drawing and perspective skills to create frescoes, murals and trompe l'oeil on the wall palette.

INT 280 Co-op/Internship   **1-6 Credits**
Prerequisites: Program Advisor Approval. Students work at job sites that are specifically related to career objectives. Provides on-the-job experience while earning course credit.

IVY 070 College and Life Success   **3 Credits**
Prerequisites: Minimum entry assessment scores for reading and writing. Enhances success in college by assisting students in obtaining skills necessary to reach their educational, career, and life objectives. Topics include time management, memory techniques, textbook usage, note taking, test taking, problem solving and decision making, group interaction, communication skills, and resource and technology utilization.

IVY 071 Study Skills Survey 1 Credit
Prerequisites: Minimum entry assessment at the ENG 024 and ENG 031 level. Enhances success in college by assisting students in obtaining skills necessary to reach their educational, career, and life objectives. Topics include memory, reading, note-taking, test-taking techniques, strategies for scheduling time to study, and dealing with test anxiety.

IVY 072 Research Strategies 1 Credit
Prerequisites: Minimum entry assessment at the ENG 024 and ENG 031 level. Enhances success in college by assisting students in obtaining skills necessary to reach their educational, career, and life objectives, specifically in the area of information literacy. Students will learn how to use an email account and a variety of on-line resource information databases. Students will learn how to gather required information for source citation when summarizing, paraphrasing, and quoting resources. The course also addresses basic issues concerning informational integrity.

IVY 073 Styles of Learning 1 Credit
Prerequisites: Minimum entry assessment at the ENG 024 and ENG 031 level. Enhances success in college by assisting students in obtaining skills necessary to reach their educational, career, and life objectives. Students will learn a holistic, integrated, principle-centered approach for solving academic challenges. This course represents a step-by-step learning process which provides effective tools that help students adapt to change.

IVY 101 First Year Seminar 1 Credit
Prerequisites: None. Provides students with specific skills and strategies necessary to reach their educational, career, and life objectives. Topics include time management, study skills, learning styles, campus and community resources, critical thinking, utilization of technology, career skills, and diversity in society.

IVY 102 Information Studies and Research Skills 1 Credit
Prerequisites: None. Introduces students to a variety of information skills: understanding how information and knowledge is produced and organized; creating a strategy for finding information; using and identifying print and electronic resources; locating and evaluating information found; citing and documenting information appropriately; and understanding issues relating to intellectual freedom and copyright laws.

IVY 103 Health and Wellness 1 Credit
Prerequisites: None. Educates students about the importance of fitness/wellness in their everyday lives. Students will have the opportunity to customize their own behavioral plans for fitness/wellness.

IVY 104 Critical Thinking 1 Credit
Prerequisites: None. Assists students in developing critical thinking strategies with academic and workplace applications.

IVY 105 Managing Personal Finances 1 Credit
Prerequisites: None. An overview of how to manage personal finances. The course includes information in the areas of personal finances, loans, credit, investing and taxes.

IVY 106 Career Exploration 1 Credit
Prerequisites: None. Enhances success in college by assisting students in obtaining the skills necessary to identify their life, educational, and career goals, specifically in the area of academic and programmatic offerings that support possible career choices.

IVY 107 Professional Presence 1 Credit
Prerequisites: None. Provides students with the opportunity to develop a professional presence in business and social settings. Topics include professional communication, proper etiquette and job attainment skills.

IVY 108 Academic Project and Portfolio Management 1 Credit
Prerequisites: None. A study of the basic project and portfolio process and provides students with the opportunity to plan and develop a project or portfolio for academic or professional presentation.

IVY 109 Online Learning Technologies 1 Credit
Prerequisites: None. Prepares students to succeed in an online learning environment. The course provides an opportunity to demonstrate intellectual, social, and technical skills through the use of online technologies. This course also prepares students for online learning and training opportunities in the workplace.

IVY 110 Transfer Success 1 Credit
Prerequisites: None. Examines the essential skills and information needed for transfer to a four-year institution. Emphasizes developing an individual transfer plan.

IVY 120 New Student Seminar 3 Credit
Prerequisites: Minimum entry assessment. Enhances success in college by assisting students in obtaining skills necessary to their educational, career, and life objectives. Students will create and apply critical thinking strategies in areas of time management, media literacy, learning styles, study skills, career planning, money management, and resource utilization.

LEG 101 Introduction to Paralegal Studies 3 Credits
Prerequisites: Demonstrated competency through appropriate assessment or earning a grade of "C" or better in ENG 025 and ENG 032. A survey of the American legal system, the substantive and procedural law of Indiana, and the role of the paralegal in the legal profession. Topics include professional ethics, trial and appellate courts, civil and criminal procedure, constitutional law, and basic legal analysis. This entry-level course is a prerequisite for all other paralegal courses in the program.

LEG 102 Legal Research 3 Credits
Prerequisites: LEG 101. Introduces the student to legal research resources including cases reporters and digest indexes, statutory codes, constitutions, administrative codes and registers, legal encyclopedias, treatises, legal periodicals, and practice manuals and form books. Instruction is also delivered on proper legal citation form, citation services, and research strategy. Projects include a series of law library research projects that teaches the student the descriptive word method of research, basic legal analysis, and the structure of a legal research memorandum of law. 20 hours of law library attendance required in this course.

LEG 103 Civil Procedure 3 Credits
Prerequisites: LEG 101. The first of two semesters devoted to the study of the Indiana Trial rules, small claims, court rules, and local rules. (The second course is LEG 202) Topics include filing requirements, the rules regarding service of process, and calculation of deadlines. Projects include drafting summonses, complaints, answers, and various motions.

LEG 106 Tort Law 3 Credits
Prerequisites: LEG 101. Concerns the law of non-criminal injuries to persons or property. Topics include negligence, strict liability, product liability, intentional torts, affirmative defenses, basic evidence law, and pre-trial investigation techniques and resources.

LEG 107 Contracts and Commercial Law 3 Credits
Prerequisites: LEG 101. Examines the nature of contracts and commercial law under both the common law and the Commercial Code of Indiana. Topics include contracts for sales of goods (UCC Article 2), the Statute of Frauds, performance, remedies, warranties, assignment law, negotiable instruments law (UCC Article 3), and secured transactions law (UCC Article 9).

LEG 108 Property Law 3 Credits
Prerequisites: LEG 101. A survey of the law of real and personal property in Indiana. Property law concepts are analyzed. Topics include the different types of property generally, estates in land, concurrent ownership, legal descriptions and deeds, easements, encumbrances on title, title searches and title insurance, real estate purchase agreements, closings, mortgages and UCC Article 9 security interests, foreclosures, landlord-tenant law, and personal property law topics such as bailments, lost property, and intellectual property. This is an introductory course in real and personal property law for paralegal majors.

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LEG 200 Legal Ethics 3 credits

Prerequisites: LEG 102. Examines rules of professional conduct that apply to all legal professions including: the American Bar Association Model Rules of Professional Conduct, the Indiana Rules of Professional Conduct, the American Bar Association Guidelines for the Utilization of Legal Assistants; and various other sets of rules of conduct created by paralegal associations.

LEG 202 Litigation 3 Credits

Prerequisites: LEG 101 and LEG 103. The study of Indiana trial rules pertaining to actual trial. Topics include the discovery process and discovery tools, litigation support—including organization and retrieval of trial documents—techniques in preparing witnesses for trial, and preparing jury instructions. The main project is compiling a trial notebook.

LEG 203 Law Office Technology 3 Credits

Prerequisites: LEG 102. A hands-on survey of software support available to the law practitioner, including word processing, electronic spreadsheets, database management, presentation software, docket control, litigation support, timekeeping, and billing. Also included is information on computer-assisted legal research services, web based research, and electronic filing.

LEG 204 Legal Writing 3 Credits

Prerequisites: LEG 102 and LEG 103. Further develop the legal writing skills the students touched upon in Legal Research. The student will be exposed to various legal writing techniques that are used in drafting a wide variety of legal documents. Throughout the semester, a strong emphasis is placed on proper writing methodology and formatting. Projects include drafting research, correspondence, litigation and transactional documents.

LEG 205 Business Associations 3 Credits

Prerequisites: LEG 101. Introduces the student to the various forms of business entities, including sole proprietorships, general and limited partnerships, limited liability companies (LLC's), and business corporations. Topics include key concepts of law (the relationship between principals and agents), the scope of employment doctrine, and respondeat superior, the distinguishing characteristics of common business entities, the formal requirements for establishing and doing business in various types of business organizations in Indiana, respective advantages and disadvantages of each type, and relevant tax issues. Students will review sample business formation documents and will draft a general partnership agreement.

LEG 206 Advanced Tort Law 3 Credits

Prerequisites: LEG 106. A continuation of the principles and issues discussed in Tort Law class, including res ipsa loquitur, attractive nuisance, premises liability and wrongful death. Litigation support and strategy will also be discussed.

LEG 209 Family Law 3 Credits

Prerequisites: LEG 101. An introduction to the Indiana law of marriage, dissolution, custody (including UCCJA), visitation, support (including URESA), adoption, and guardianship of minors. Students will review many pleadings and intake forms and will draft a divorce petition, a financial statement, a summary decree with child support worksheet.

LEG 210 Wills, Trust, and Estates 3 Credits

Prerequisites: LEG 101. Concerns the law of wills and trusts, the administration of estates, and guardianships according to Indiana common law and the provisions of Titles 29, 30 and Title 6 (death taxes) of the Indiana Code. Students study the intestate succession, the elements of a valid will, of a valid trust, and laws of will construction.

LEG 212 Bankruptcy Law 3 Credits

Prerequisites: LEG 101. A survey of the Federal Bankruptcy Act, including the various bankruptcy proceedings. There under emphasizes how to accumulate the debtor's financial information, compile initial schedules, prepare the list of creditors, collect and organize data for the first meeting of creditors, complete proofs of claim, and pursue creditors rights. Including preparation of a Chapter 13 bankruptcy case.

LEG 280 Internship 3 Credits

Prerequisites: Program Advisor Approval. An opportunity for the intermediate paralegal student to acquire valuable field experience by working under attorney supervision. The student keeps a journal and prepares a report of his or her experience at the end of the semester.

LIB 101 Introduction to Libraries and Library Services 3 Credits

Prerequisites: None. Surveys the history, organization, services, and functions of libraries. Provides Library Technical Assistant students with an introduction to and overview of the Library field and the different types of libraries.

LIB 102 Introduction to Reference Sources and Services 3 Credits

Prerequisites: Demonstrated competency through appropriate assessment or earning a grade of "C" or better in ENG 025 and ENG 032. This course gives an overview of the reference function with emphasis on the role of the LTA. Emphasis is placed on developing a working knowledge of basic reference tools and sources, both print and online. An awareness of the reference interview techniques and process is also gained.

LIB 103 Introduction to Libraries Public Services 3 Credits

Prerequisites: Demonstrated competency through appropriate assessment or earning a grade of "C" or better in ENG 025 and ENG 032. Overview of the role of the Library Technical Assistant (LTA) in library

public service areas such as reference, circulation, interlibrary loan, bibliographic instruction, children and young adult services, and public relations and promotions, with in depth coverage of circulation and interlibrary loan. The course will also focus on the development of customer service and effective communication skills.

LIB 104 Introduction to Technical Services 3 Credits

Prerequisites: Demonstrated competency through appropriate assessment or earning a grade of "C" or better in ENG 025 and ENG 032. This course is designed to prepare Library Technical Assistants with the skills necessary to: assist in acquisitions and processing, serials control, resource preservation and maintenance. Emphasis will be placed on processes necessary for seamless incorporation of technical services into library services delivered to patrons.

LIB 201 Cataloging and Classification 3 Credits

Prerequisites: Demonstrated competency through appropriate assessment or earning a grade of "C" or better in ENG 025 and ENG 032. Introduces students to the basic concepts of classification and cataloging within a library setting. Emphasis is placed on the development of a working knowledge of both descriptive and subject cataloging resources, Library of Congress and Dewey Decimal classification systems, copy cataloging, and MARC format.

LIB 202 Electronic Resources and Online Searching 3 Credits

Prerequisites: Demonstrated competency through appropriate assessment or earning a grade of "C" or better in ENG 025 and ENG 032. This course introduces students to essential electronic information sources (library catalogs, digital libraries, academic or gated databases, government resources, and the Internet) used in a variety of library environments, along with the online searching skills needed to effectively use them. The course emphasizes hands-on training with resources available in Indiana (through INSPIRE and Ivy Tech's Virtual Library), Boolean logic and other search strategies, copyright issues regarding digital information, retrieving, evaluating and citing information.

LIB 203 Library Services for Children 3 Credits

Prerequisites: Demonstrated competency through appropriate assessment or earning a grade of "C" or better in ENG 025 and ENG 032. An overview of the materials and services for children and young adults in a public library with emphasis on the role of the LTA. Emphasis is placed on developing a working knowledge of programming for youth ages 0-18. This course will also provide an overview of children's literature, both classic and contemporary, and reference resources that will assist the LTA in providing reader's advisory to youth.

LIB 204 Library Media Center Operations and Services 3 Credits

Prerequisites: Demonstrated competency through appropriate assessment or earning a grade of "C" or better in ENG 025 and ENG

032. An overview of the role of the Library Technical Assistant (LTA) in a School Library Media Center by offering an introduction to the purposes, functions, services, and organizational structure of school library media centers. Basic materials, policies, procedures, philosophies, terminology, and services that make up today's media center services will be covered. A variety of activities will be included, such as fi eld trips, online and written presentations, and group discussions and projects.

LIB 205 Library and Media Materials and Equipment 3 Credits
Prerequisites: Instructor Approval. Covers the fundamentals of library/media center technology, including instructional technology, educational media, computers, and related technologies. The course covers basic library/media center technology concepts, media utilization, and the use of computers in support of teaching and learning.

LND 101 Landscape Trees 3 Credits
Prerequisites: None. The identification of shade, ornamental, and evergreen trees. Including evaluating species quality, growth habits, and site adaptability; covers 125 species important to landscaping tree care.

LND 102 Shrubs and Other Plants 3 Credits
Prerequisites: None. The identification of 125 shrubs, vines, ground covers, and herbaceous plants important to landscaping including evaluation of growth habits, species quality, and site adaptability.

LND 103 Landscape Management I 3 Credits
Prerequisites: None. Methods in the practice of landscaping, tree care, and turf management are briefly introduced through lectures, slides, videos, and field trips. Weed problems and their control are studied. A large segment of the course is devoted to the study of non-pathogenic problems of landscape plants and turf as well as their pathogenic diseases, and management of these problems.

LND 104 Turf Management 3 Credits
Prerequisites: None. A study of the particular growth characteristics of the grass species used in lawn areas in the Midwest and Great Lakes area. Also covers the competitive influences and how to control these problems and promote good turf.

LND 105 Landscape Botany 3 Credits
Prerequisites: Program Chair Approval. The study of the life of a plant; cell structure; the structure and function of roots, stems, leaves, flowers, and seeds; the assimilation of water and nutrients in the plants growth and the stages of development as well as the place and importance of soils. This class is important to one seeking qualification as a licensed pesticide applicator.

LND 106 Landscape Design I 3 Credits
Prerequisites: LND 101 and LND 102. Landscape drafting techniques

and basic landscape planning for residential and small business settings utilizing the proper selection of ornamental plants consistent with design and environmental requirements. Included are lectures, slide and fi lm presentations, and lab work with drafting tools and equipment.

LND 201 Landscape Management II 3 Credits
Prerequisites: LND 103. Takes advantage of growing season experiences to reinforce what is taught in the prerequisite course by textbook and lecture. Actual on-site observation, as well as hands on experience is planned. Actual practice in the monitoring of pest problems given.

LND 202 Landscape Design II 3 Credits
Prerequisites: LND 106. A follow up to Landscape Design I to show and give practice in somewhat more sophisticated techniques such as enhancement of drawing by color-use. Also, guidance and practice in making elevation drawings is given. Some introduction to the use of computer-aided drawings is given to the student.

LND 203 Insect Pests of Ornamentals 3 Credits
Prerequisites: Program Chair Approval. Covers insect identification, structure, and life history; pest management of insects important to landscaping and tree care.

LND 204 Herbaceous Ornamentals and Grasses 3 Credits
Prerequisites: Program Chair Approval. The identification of 125 annuals, perennials, and grasses that is important to landscape management. Slides and videos are used to introduce a list of non-woody plants which students may encounter in operating a landscape business. Bed principles, for effective landscape displays will be covered. Cultural practices propagation technique, foliage, and flower descriptions, watering, disease and insects are discussed.

LND 205 Tree Care Practices 3 Credits
Prerequisites: LND 101. Covers the basic knowledge and techniques used by one employed as an arborist in the care of larger mature trees. Includes climbing, pruning, takedowns, removals, soil relationships and fertilization, tools and equipment, and safety procedures.

LND 206 Fundamentals of Horticulture 3 Credits
Prerequisites: Program Chair Approval. Studies the basic horticulture of plant structure, growth, function, and development, including propagation, maintenance, and selection. Studies will include use of fertilization and pesticides for the control of diseases and pests.

LND 207 Soils 3 Credits
Prerequisites: None. Studies the growth habits and culture of plants not particularly ornamental or frequently used in the landscape. However, knowledge of these plants will be useful to one employed in a garden center or service organization where this person is frequent-

ly expected to know answers to questions pertaining to gardening and horticulture.

LOG 101 Introduction to Materials Management 3 Credits
Prerequisites: Demonstrated competency through appropriate assessment or earning a grade of "C" or better in ENG 025, ENG 032. Studies factors influencing the flow of materials in a manufacturing enterprise. Covers basics of production planning and control, purchasing, forecasting, inventory and distribution issues. Concludes with an overview of just-in-time theory and practices.

LOG 202 Physical Distribution 3 Credits
Prerequisites: Demonstrated competency through appropriate assessment or earning a grade of "C" or better in ENG 025 and ENG 032. Focuses on the major concepts and rationale for utilizing warehouse inventories to lower costs of transportation, improve customer service, avoid stockouts, improve purchasing economics and seasonal variability.

MAT 040 Basic Mathematics Skills 3 Credits
Prerequisites: Demonstrated competency through appropriate assessment. Concentrates on basic operations with whole numbers, fractions, decimals and their applications. Introduces a variety of math learning strategies. Includes United States Customary Measurement System.

MAT 044 Mathematics 3 Credits
Prerequisites: Demonstrated competency through appropriate assessment or earning a grade of "C" or better in MAT 040. Reviews basic operations with fractions, decimals and their applications. Concentrates on ratio, proportion, percents, measurement, geometric concepts, signed numbers, interpreting and constructing graphs, basic linear equations, and applications. A develop mental mathematics course.

MAT 050 Basic Algebra 3 Credits
Prerequisites: Demonstrated competency through appropriate assessment or earning a grade of "C" or better in MAT 044. Reviews signed numbers and basic linear equations. Concentrates on integer exponents, scientific notation, linear equations and inequalities, literal equations, polynomial operations, polynomial factoring, graphing linear equations, and applications. A developmental algebra course.

MAT 070 Elements of Algebra and Geometry 3 credits
Prerequisites: Demonstrated competency through appropriate assessment or a grade of "C" or better in MAT 044. Blends basic algebraic skills and relationships with geometric applications. Although the disciplines of algebra and geometry are often perceived as separate in the study of mathematics, this course utilizes algebraic skills in simplifying expressions, manipulating variables, solving equations, and graphing linear relationships to solve real-world geometric applica-

tions of area, volume, polygons, polyhedra, and right triangles. Designed to prepare students for MAT 117.

MAT 080 Mathematics Principles with Algebra   3 credits
Prerequisites: Demonstrated competency through appropriate assessment or earning a grade of "C" or better in MAT 044. Reviews signed numbers and basic linear equations. Concentrates on percents, proportions, measurement, exponents, square roots, linear equations and inequalities, literal equations, graphing linear equations, and applications. Designed to prepare students for success in MAT 118.

MAT 111 Intermediate Algebra   3 Credits
Prerequisites: Demonstrated competency through appropriate assessment or a grade of "C" or better in MAT 050 or MAT 080. Reviews basic operations of polynomials, scientific notation, linear equations and inequalities, graphing linear equations, and factoring algebraic expressions. Concentrates on properties of integer and rational exponents, rational expressions and equations, systems of linear equations, radicals, radical equations, quadratic equations, functions and their graphs, and applications. A standard college level intermediate algebra course.

MAT 112 Functional Mathematics   3 Credits
Prerequisites: Demonstrated competency through appropriate assessment or earning a grade of "C" or better in MAT 050 or MAT 080. Through real-world approaches, presents mathematical concepts of measurement, proportion, geometry, equations and inequalities, probability and statistics. Brief survey of college mathematics.

MAT 115 Statistics   3 Credits
Prerequisites: MAT 111. Provides study in the collection, interpretation and presentation of descriptive and inferential statistics, including measures of central tendency, probability, binomial and normal distributions, hypothesis testing of one-and two-sample populations, confidence intervals, chi-square testing, correlation, data description and graphical representations. An introductory statistics course.

MAT 117 The Art of Geometry   3 Credits
Prerequisites: Demonstrated competency through appropriate assessment or a grade of "C" or better in MAT 050 or MAT 070. This course emphasizes visualization and appreciation of the beauty of mathematics through geometry; translates between visual and symbolic representations of objects used in art and design; applies mappings, symmetry, similarity, vectors, and geometric constructions of shapes to working with 2D and 3D figures; uses geometry software, hands-on techniques and models.

MAT 118 Concepts in Mathematics   TransferIN 3 Credits
Prerequisites: Demonstrated competency through appropriate assessment or a grade of "C" or better in MAT 050 or MAT 080. Through real world approaches, presents mathematical concepts of measurement, proportion, interest, equations and inequalities, probability and statistics. Brief survey of college mathematics.

MAT 121 Geometry-Trigonometry   3 Credits
Prerequisites: Successful completion of MAT 111 or demonstrated competency through appropriate assessment. Includes polygons, similar figures, geometric solids, properties of circles, constructions, right triangles, angle measurements in radians and degrees, trigonometric functions and their application to right triangles, Pythagorean Theorem, laws of sine and cosine, graphing of trigonometric functions, trigonometric identities, vectors and polar coordinates. Introductory study of geometry and trigonometry.

MAT 131 Algebra/Trigonometry I   3 Credits
Prerequisites: Successful completion of MAT 111 or demonstrated competency through appropriate assessment. Presents an in-depth study of functions, quadratic, polynomial, radical, and rational equations, radicals, complex numbers, right triangle trigonometry, oblique triangles, vectors, and graphs of sine and cosine functions. First in a series of two courses of College Algebra/Trigonometry.

MAT 132 Algebra/Trigonometry II   3 Credits
Prerequisites: MAT 131. Continues study of algebra and trigonometry including systems of equations, matrices, graphing of trigonometric functions, trigonometric equations and identities, rectangular and polar coordinates, complex numbers, exponential and logarithmic functions and conics. Second in a series of two courses of College Algebra/Trigonometry.

MAT 133 College Algebra with Analytic Geometry   4 Credits
Prerequisites: Successful completion of MAT 111 or demonstrated competency through appropriate assessment. Presents an indepth study of functions, quadratic, polynomial, radical, and rational equations, radicals, complex numbers, systems of equations, matrices, exponential and logarithmic functions, and conics. A standard College Algebra course.

MAT 134 Trigonometry   2 Credits
Prerequisites: Successful completion of MAT 111 or demonstrated competency through appropriate assessment. Presents an in-depth study of right triangle trigonometry, oblique triangles, vectors, graphs of trigonometric functions, trigonometric identities and equations and complex numbers in rectangular and polar/trigonometric forms, rectangular and polar coordinates. A standard college trigonometry course.

MAT 135 Finite Math   3 Credits
Prerequisites: Successful completion of MAT 111 or demonstrated competency through appropriate assessment. Surveys solving and graphing linear equations and inequalities, elementary set theory, matrices and their applications, linear programming, and elementary probability. A standard finite mathematics course.

MAT 136 College Algebra   3 Credits
Prerequisites: Successful completion of MAT 111 or demonstrated competency through appropriate assessment. Presents an in-depth study of functions, quadratic, polynomial, radical, and rational equations, radicals, complex numbers, systems of equations, matrices, and exponential and logarithmic functions. MAT 136 and MAT 137 together comprise a standard two-semester college algebra and trigonometry course.

MAT 137 Trigonometry with Analytic Geometry   3 Credits
Prerequisites: Successful completion of MAT 111 or demonstrated competency through appropriate assessment. Presents an in-depth study of right triangle trigonometry, oblique triangles, vectors, graphs of trigonometric functions, trigonometric identities and equations and complex numbers in rectangular and polar/trigonometric forms, rectangular and polar coordinates, rational functions and conics.

MAT 141 Mathematics for Elementary Teachers   4 Credits
Prerequisites: Demonstrated competency through appropriate assessment or MAT 111 or MAT 112. An in-depth treatment of common topics underlying an elementary mathematics curriculum. Students in the course will gain an appreciation for mathematics and will add to their pedagogical expertise by gaining conceptual understanding of elementary mathematics through the use of selected modes, materials, and problem solving situations. The course is designed to connect knowledge of the real number system to other subjects. The selection of topics presented in this course is based upon standards and recommendations for the mathematical content knowledge essential for prospective teachers made by the National Council of Teachers of Mathematics, the Mathematical Association of America, and the Indiana Professional Standards Board.

MAT 201 Brief Calculus I   3 Credits
Prerequisites: Successful completion with a "C" or better in MAT 131, MAT 133 or MAT 136. An introductory course in calculus. Fundamental concepts and operations of calculus including algebraic, exponential and logarithmic functions: limits, continuity, derivatives, points-of-inflection, first-derivative test, concavity, second-derivative test, optimization, antiderivatives, integration by substitution, and elementary applications of the derivative and of the definite integral.

MAT 202 Brief Calculus II   3 Credits
Prerequisites: MAT 201. Covers topics in elementary differential equations, calculus of functions of several variables and infinite series.

MAT 211 Calculus I   4 Credits
Prerequisites: Demonstrated competency through appropriate assessment or MAT 131 and MAT 132 or MAT 133 and MAT 134 or MAT 136 and MAT 137. Reviews the concepts of exponential, logarithmic and inverse functions. Studies in depth the fundamental

concepts and operations of calculus including limits, continuity, differentiation including implicit and logarithmic differentiation. Applies differential calculus to solve problems in the natural and social sciences, to solve estimation problems and to solve optimization problems. Applies differential calculus to sketch curves and to identify local and global extrema, inflection points, increasing/ decreasing behavior, concavity, behavior at infinity, horizontal and vertical tangents and asymptotes, and slant asymptotes. Applies the concept of Riemann sums and antiderivatives to find Riemann integrals. Applies the fundamental theorem of calculus to solve initial value problems, and to fi nd areas and volumes and the average values of a function.

MAT 212 Calculus II 4 Credits
Prerequisites: MAT 211. Studies the techniques of substitution, integration by parts, trigonometric integrals, partial fractions and trigonometric substitution to evaluate integrals. Applies Simpson's rule and other elementary numerical quadrature methods to approximate integrals. Applies the integral calculus to find arc lengths, areas of surfaces of revolution and to solve force and work problems. Applies the direction field technique to find graphical solutions of differential equations. Applies Euler's technique to approximate the solution of initial value problems. Studies techniques of solving separable differential equations. Studies techniques to determine convergence of sequences and series. Studies techniques to determine the power series representation of functions.

MAT 218 Calculus with Analytic Geometry I 5 Credits
Prerequisites: Demonstrated competency through appropriate assessment or MAT 131 and MAT 132 or MAT 133 and MAT 134 or MAT 136 and MAT 137. Topics from analytic geometry, concept and properties of limits, concept of mathematical continuity definition and procedures for differentiation, and definition and procedures for anti-differentiation.

MAT 219 Calculus with Analytic Geometry II 5 Credits
Prerequisites: MAT 218. Topics from Calculus and Analytic Geometry I, calculus to hyperbolic and inverse trigonometric functions, first and second order differential equations, integration by parts and partial fractions, convergence, Taylor and Maclaurin series expansions, and L'Hôpital's rule.

MAT 221 Calculus for Technology 3 Credits
Prerequisites: Demonstrated competency through appropriate assessment of MAT 131 and MAT 132 or MAT 133 and MAT 134 or MAT 136 and MAT 137. Provides a solid, practical, working knowledge of calculus and its application to various scientific and technical fields.

MAT 261 Multivariate Calculus 4 Credits
Prerequisites: MAT 212 or MAT 219. Solid analytic geometry, partial differentiation, multiple integrals.

MAT 264 Differential Equations 3 Credits
Prerequisites: MAT 261. A first course in ordinary differential equations. The course will develop topics from a dynamical systems perspective and use technology to treat these topics graphically, numerically, and analytically. In addition to the skills of logical analysis and creative problem solving, this course will enhance the student's ability to analyze problems orally and in writing, in addition to mastering the mathematical skills used in this analysis.

MAT 265 Linear Algebra 3 Credits
Prerequisites: MAT 212. An introduction to linear algebra. Systems of linear equations, matrix algebra, vector spaces, determinants, eigenvalues, eigenvectors, diagonalization of matrices, applications.

MEA 102 First Aid and CPR 2 Credits
Prerequisites: None. Provides students with information necessary to recognize emergency situations, know the proper course of action with different types of emergencies, and apply appropriate first aid including CPR.

MEA 107 Administrative I 3 Credits
Prerequisites: Demonstrated competency through appropriate assessment or earning a grade of "C" or better in ENG 025 and ENG 032. Provides a basic understanding of the administrative duties and responsibilities pertinent to medical offices. Includes instruction in medical correspondence and records, case histories of patients, filing, telephone procedures, appointment scheduling, receptionist duties, and processing mail. Includes simulated data entry for patient's record, and appointment scheduling. Written, verbal and nonverbal communication according to patient needs are covered as well as documentation and associated legal and ethical boundaries. Medical law, ethics, state and federal laws are covered.

MEA 108 Administrative II 3 Credits
Prerequisites: Demonstrated competency through appropriate assessment or earning a grade of "C" or better in MAT 044, ENG 025 and ENG 032. Provides instruction in medical office financial administration, bookkeeping, materials management, daily financial transactions with patients and outside sources, banking procedures, billing and collection. General office policies, patient instruction according to needs and regarding health issues. Inventory management of supplies and equipment is covered. Community resources available to patients are also explored.

MEA 135 Medical Word Processing and Transcription 3 Credits
Prerequisites: HHS 101 and OAD 019. Develops skills and knowledge of medical dictation, machine transcription, and word processing software. Includes typing and transcription of medical correspondence and a variety of medical reports.

MEA 137 Medical Insurance and Basic Coding with Computer Applications 3 Credits
Prerequisites: HHS 101. Provides an overview of medical insurance programs and the skills needed in handling insurance forms, CPT and ICD 9-CM coding and insurance reports as applied to the medical office. Includes simulated computer data entry for patient records, procedure and diagnostic codes, insurance processing and electronic transmission of claims.

MEA 151 Pharmacy Technician I 3 Credits
Prerequisites: HHS 101 and demonstrated competency through appropriate assessment or earning a grade of "C" or better in MAT 050. Corequisites: MEA 152. Introduces basic skills and information needed for a career as a Pharmacy Technician in the state of Indiana.

MEA 152 Pharmacy Technician II 3 Credits
Prerequisites: None. Corequisites: MEA 151. Theory is applied through performance of competency levels of the technical pharmacy task including: properly preparing, documenting and processing prescriptions according to pharmacy policy and regulations; preparation of intravenous and special solutions; proper preparation and maintenance of records appropriate to the pharmacy, including quality control records, controlled substances (narcotic drug distribution), prescription data and records; application of basic principles of microbiology; aseptic techniques; and the operation and maintenance of the laminar hood. The student will utilize proper communication skills (both written and verbal). Identification and adherence to check points will be emphasized. Current national and Indiana Law and administrative rules as they relate to the practice of the pharmacy technician will be presented. The importance of adherence to universal precautions will be discussed.

MEA 205 Introduction to Electrocardiography 3 Credits
Prerequisites: HHS 101. Presents the rationale for obtaining an electrocardiogram as well as related theory including anatomy and physiology, procedural technique and equipment utilized. Students will be introduced to basic rhythm analysis including recognizing standard electrical waves and accurately measuring each normal sinus rhythm and basic arrhythmias.

MEA 206 Advanced Electrocardiograph Technique 3 Credits
Prerequisites: MEA 205. Discusses related anatomy and physiology of the cardiovascular system, identification of cardiac arrhythmias, their rhythm strip appearance and common treatment modalities. Also includes event and Holter monitoring.

MEA 207 Integrated Medical Office Procedures 3 Credits
Prerequisites: MEA 107 and MEA 108. Provides instruction in medical office procedures using integrated computer programs that manage appointments, insurance documentation, file maintenance and cre-

ation, management of medical correspondence, licensing and software update processes and data back-up files.

MEA 212 Phlebotomy   3 Credits
Prerequisites: HHS 101 and MEA Program Chair Approval. Presents the principles and practices of laboratory specimen collection and processing. Also covers medical terminology, infection control, patient identification, anatomy and physiology, anticoagulants, blood collection, specimen processing and interpersonal skills.

MEA 213 Advanced Insurance Coding   3 Credits
Prerequisites: MEA 137. Comprehensive coding skills and guidelines for both ICD-9 and HCPCS Levels I and II coding systems necessary to ensure accurate coding and maximize reimbursement for medical claim processing.

MEA 215 Advanced Medical Terminology   3 Credits
Prerequisites: HHS 101. A more detailed and advanced study of the derivatives of medical terms, symbols and signs. It presents an in-depth study of the correlation between medical vocabulary and the application of those terms in the anatomy and physiology of the body, related diseases, conditions and treatment.

MEA 218 Pharmacology   3 Credits
Prerequisites: ANP 101, HHS 101 and demonstrated competency through appropriate assessment or earning a grade of "C" or better in MAT 050. Discusses the most common medications in current use with emphasis on classifications, uses, routes or administration, dosages, interactions, incompatibilities, and side effects. Emphasizes the current 50 most commonly prescribed drugs. Addresses special precautions, legal aspects, and patient education and preparation and administration of medications.

MEA 219 Medical Assisting Laboratory Techniques   3 Credits
Prerequisites: HHS 101, ANP 101, and MEA Program Chair Approval. Prepares students to understand and perform entry-level basic laboratory procedures. This includes fundamental principles of medical lab practice, disposal of biohazard materials, specimen collection, use of methods of quality control, urinalysis testing, chemistry testing, hematology testing, immunology testing, microbiology testing, and discussion of follow-up testing results.

MEA 220 Advanced Insurance Claims Processing   3 Credits
Prerequisites: MEA 137. Introduces additional instruction in medical record extraction and various aspects of insurance processing and follow-up. Provides discussion and additional information in the various insurance programs and in related insurance coding competencies.

MEA 221 Seminar I   1 Credit
Prerequisites: None. Discusses topics of current interest in the medical

assisting profession. Focuses on special interest project for students in the Medical Assisting Program. Uses field trips, guest speakers, audio-visual activities and seminars.

MEA 224 Hospital Coding   3 Credits
Prerequisites: HHS 101 and MEA 137. Introduces additional instruction in diagnostic related groups (DRG's) and medical record extraction. Provides discussion and performance opportunities in related insurance coding competencies.

MEA 227 Medical Office Management   3 Credits
Prerequisites: MEA 107, MEA 108 and MEA 137. An in-depth study of various influences on office functions providing a background for organization and management of a physician's office. Includes government and professional sources for consultation.

MEA 235 Advanced Transcription   3 Credits
Prerequisites: MEA 135. Improves accuracy and speed of the medical transcriptionist utilizing various formats for medical transcription.

MEA 238 Clinical I   3 Credits
Prerequisites: HHS 101 and MEA Program Chair Approval. Presents theory and lab related to clinical aspects of the medical office. Provides students with information necessary to recognize emergency situations, know the proper course of action with different types of emergencies, and apply appropriate first aid. Allows students to become familiar with clinical duties and to gain the skills needed to perform them. Includes vital signs, asepsis, sterilization, nutrition, and treatment room procedures.

MEA 239 Clinical II   3 Credits
Prerequisites: MEA 238. Presents a continuation of clinical skills and theory, and allows the student to become familiar with the following clinical duties: Medications, EKG's, X-ray, physical therapy, respiratory testing and other technical skills needed to assist the physician.

MEA 240 Advanced Clinical Procedures   3 Credits
Prerequisites: MEA 239. Advances the knowledge and skills enabling the student to assist in clinical management in the medical and surgical specialties. Addresses health services in the community which are directed toward prevention of disease and maintenance and restoration of health.

MEA 242 Disease Conditions   3 Credits
Prerequisites: ANP 102 and HHS 101. Presents the basic concepts of diseases, their courses and functional disturbances as they relate to body systems. Includes the precipitating risk factors and appropriate methods of patient education regarding various disease processes.

MEA 254 Pharmacy Externship   3 Credits
Prerequisites: MEA 152, Professional CPR/AED certification and MEA Program Chair Approval. Provides the opportunity to discuss and per-

form clinical procedures under supervision, with learning experiences obtained in selected retail pharmacies and/or hospitals.

MEA 255 Pharmacy Technician Experiential Seminar   3 credits
Prerequisites: Program Advisor Approval. Provides the opportunity to observe, discuss and perform basic pharmacy related procedures under supervision, with learning experiences obtained in selected retail pharmacies and/or hospitals. Prepares student for national certification examination.

MEA 256 Insurance Coding Externship   3 Credits
Prerequisites: MEA 213, MEA 220, Professional CPR/AED certification and MEA Program Chair Approval. Provides opportunities to observe, perform and discuss various insurance related competencies under supervision in selected physician offices, clinics or hospitals.

MEA 257 Phlebotomy Externship   3 Credits
Prerequisites: MEA 212, Professional CPR/AED certification and MEA Program Chair Approval. Provides the opportunity to discuss and perform phlebotomy procedures under supervision with learning experiences obtained in selected laboratories, physician offices, clinics, or hospitals.

MEA 258 Medical Assisting Clinical Externship   3 Credits
Prerequisites: MEA 218, MEA 239, ANP 102, Professional CPR/AED certification, and MEA Program Chair Approval. Provides opportunities to observe, perform, and discuss various clinical competencies under supervision, with learning experiences obtained in selected physician offices, clinics or hospitals. Course will also review the following basic principles of psychology as they apply to the medical assistant: developmental stages of the life cycle, hereditary, cultural and environmental influences on behavior, mental health and applied psychology.

MEA 259 Medical Assisting Administrative Externship   3 Credits
Prerequisites: MEA 137, Professional CPR/AED certification and MEA Program Chair Approval. Provides opportunities to observe, perform, and discuss various administrative competencies under supervision, with learning experiences obtained in selected physician offices, clinics or hospitals.

MEA 299 CMA Comprehensive Review   3 Credits
Prerequisites: MEA Program Chair Approval. Designed to review the entire medical assisting program in preparation for the CMA national examination. Administrative, clinical and general information is covered. Testing procedures are addresses. Emphasis will be placed on job readiness and placement. The course will give continuing education units for the graduate CMA in order to fulfill their certification renewal requirements.

MIT 101 Shop Mathematics   3 Credits
Prerequisites: None. Provides a review of basic operations with numbers, fractions and decimals as a basic foundation. It presents the range of practical mathematics that a young machinist is expected to use in the classroom and later in the shop in the creation and maintenance of tools, fixtures and industrial devices. The last group of practical topics applies math to special calculations as: taper angles, gearing ratios, gearing systems, and cutting speeds and feeds. Included are applications that three dimensional in nature such as angled holes and surfaces that are utilized concepts found in solid geometry and trigonometry.

MIT 102 Introduction to Print Reading   3 Credits
Prerequisites: Demonstrated competency through appropriate assessment or earning a grade of "C" or better in MAT 040. Provides an introduction to reading and interpreting machine shop symbols, welding blueprints and working drawings used in trades and crafts. Focuses on dimension, shape, fabrication and assembly. Applies basic mathematics to the solution of print and performance problems.

MIT 103 Motors and Motor Controls   3 Credits
Prerequisites: MIT 113. A general understanding of common types of electric motors, extending from the small shaded pole fan motors to the large three-phase motors. The student will receive an education in motor theory, magnetism and how it affects motor rotation. Motor starting components and protective devices for motor circuits will be explained and shown in detail. Heat dissipation from a motor, motor slippage, how they are wired to obtain different speeds, and how capacitors affect a motor circuit will be included.

MIT 104 Fluid Power Basics   3 Credits
Prerequisites: Demonstrated competency through appropriate assessment or earning a grade of "C" or better in MAT 040. Introduces the student to fluid power principles and components. Teaches basic circuit design through the use of symbols and schematic diagrams to build a foundation for career work in fluid power technology.

MIT 105 Industrial Solid State Fundamentals   3 Credits
Prerequisites: MIT 103 and MIT 113. Studies the fundamentals of solid-state active devices that are used in automated systems. Introduces the student to the theory of basic solid-state devices such as diodes, transistors, and SCR's and applications such as amplifiers, op amps, and switching power supplies. Prepares students to diagnose, repair, verify, and install electronic circuits and systems.

MIT 106 Introduction to the Workplace and Safety   3 Credits
Prerequisites: None. Introduces basic safety instruction including OSHA requirements and other concerns (MSDS, confined space, lock out/tag out, zero energy state, hazardous materials, storage of flammable materials, storage of fuel gas and high pressure gas cylinders, portable powered tool safety, hand tool safety, record keeping, training, employer enforcement of safety regulations, right to know, etc.). Includes an introduction to measuring instruments, hand tools, portable powered tools, and procedures that are pertinent to the mix of specialties on the campus. Lab projects will be designed to reinforce safety procedures and develop competency levels in using the measuring instruments, hand tools and portable powered tools introduced in the course.

MIT 113 Basic Electricity   3 Credits
Prerequisites: Demonstrated competency through appropriate assessment or earning a grade of "C" or better in MAT 044. The study of electrical laws and principles pertaining to DC and AC circuits is the focus of the course. This includes, current, voltage, resistance, power, inductance, capacitance, and transformers. Stresses the use of standard electrical tests, electrical equipment, and troubleshooting procedures. Safety procedures and practices are emphasized.

MIT 114 Introductory Welding   3 Credits
Prerequisites: None. Provides basic skills and fundamental knowledge in oxy-fuel welding, cutting and brazing, Shield Metal Arc welding, Gas Metal Arc welding and Gas Tungsten Arc welding. This course is designed for beginning welders, auto service and body technicians, and individuals in the HVAC industry. Emphasizes safe practices in oxy-fuel and Arc welding processes.

MIT 115 Iron and Steelmaking I   3 Credits
Prerequisites: None. Covers the processes of iron making and its conversion to steel and miscellaneous finished products. The course studies the history of steel making from its roots of the steel industry and the emergence of the United Steelworkers of America. The course will examine the integrated steel industry as well as the emergences of mini-mills. It will cover the making of iron from its basic materials, coke production and the use of sinter. The student will understand the conversion of iron to steel from the basic oxygen furnace to the production of caster slabs. Also covered will be the production of steel scrap in a mini-mill process. A visit to a local steel company will be an integral part of the class.

MIT 116 Iron and Steelmaking II   3 Credits
Prerequisites: None. Covers the conversion of caster slabs to finished plate, coils, or fl at rolled products. Study of the history of the steel marketplace and the changing marketplace in which both the integrated mills and mini-mills compete. Covers the numerous steel processors and the services they provide to the steel industry. Students will learn who the steel customers are, both internal and external. OSHA and EPA requirements that steel industry must adhere to will also be studied. Visits to a finishing mill facility, a local processor, and end-use customers will be part of this class.

MIT 120 Metallurgy Fundamentals   3 Credits
Prerequisites: None. Studies the fundamentals of thermodynamics and reactions occurring in metals subjected to various kinds of heat treatment. Includes classification and properties of metals, chemical and physical metallurgy, theory of alloys, heat treatment principles as applied to ferrous and non-ferrous materials, test to determine uses, heat treatment for steels, special steels, and cast iron, powder metallurgy, and use of gas and electric furnaces and their controls.

MIT 205 Programmable Controllers I   3 Credits
Prerequisites: TEC 104 and MIT 113. Introduces the basic theory, operation and programming of programmable logic controllers. Demonstrates programming examples, set-up examples and troubleshooting, as well as PLC timing, counting, arithmetic and logic and sequencers.

MIT 206 Programmable Controllers II   3 Credits
Prerequisites: MIT 205. Serves as a further introduction to the field of industrial controls. Students will learn the principles of control systems and how they are applied to a production system to achieve automation. Systems included in the courses are stepper motors, programmable logic controllers, microprocessors, computers and feedback systems. Emphasis is placed on programmable logic controllers and the local area network.

MIT 207 Process Control and Automation I   3 Credits
Prerequisites: CIM 102, MAT 111, MIT 102, MIT 103, IMT 203, IMT 207 and MIT 206. Introduces the student to Process Control and Automation, combining the elements of the prerequisite classes into a culmination of a complete manufacturing process. Basic elements of the automation system and programming fundamentals are studied and individual systems are examined.

MIT 208 Process Control and Automation II   3 Credits
Prerequisites: MIT 207. Continues to explore the Process Control and Automation system combining the new elements with previous classes into the culmination of a more complex manufacturing process. The student will study hardware elements of the automation system and intermediate programming fundamentals for individual systems.

MIT 209 Process Control and Automation III   3 Credits
Prerequisites: MIT 208. Finalizes the Process Control and Automation system by employing new hardware and software elements to complete process. The student will build, operate and troubleshoot the process system to stimulate manufacturing procedures.

MIT 210 Rotating Machinery   3 Credits
Prerequisites: MAT 111, MIT 102, MIT 103, MIT 113, IMT 203, and IMT 207. Advanced motor and motor control course designed to apply the knowledge accrued in basic electricity, motors and motor controls, print reading, electrical circuits, and machine maintenance and installation. The theory and practical application of different types of

motors and how they are used with other types of machinery, i.e., pumps, conveyors, etc., will be explored and examined in detail.

MIT 211 Industrial Instrumentation   3 Credits
Prerequisites: MIT 113 and demonstrated competency through appropriate assessment or earning a grade of "C" or better in MAT 050. Provides instruction in the purpose, function, and application of process control instruments relative to manufacturing and industrial technology.

MIT 212 Programmable Controllers III   3 Credits
Prerequisites: MIT 206. Serves as an introduction to advance topics in the field of programmable controllers. Use of the latest technology and software will be stressed. ControlLogix, Operator Interfaces, and Networking will be some of the areas covered. In addition use of special high level functions and I/O modules will be covered such as PID loops, servo control, and use of multiple processors.

MIT 260 Problem Solving and Teamwork   3 Credits
Prerequisites: ENG 111, MAT 111 and Program Advisor Approval. Covers critical thinking skills, collection and analyzing data, and quality control overview, teamwork, problem solving and decision making techniques as they apply to a technological environment. As a capstone course for the Manufacturing and Industrial Technology program, this course is designed to reinforce and apply the knowledge and skills learned in previous communication, mathematics and technical courses and foster team and individual skills through experiments, case studies, problem solving projects, and a writing project.

MKT 101 Principles of Marketing   3 Credits
Prerequisites: Demonstrated competency through appropriate assessment or earning a grade of "C" or better in ENG 025, ENG 032 and MAT 044. Introduces the marketing role in society and how it affects the marketing strategy. Emphasizes the marketing mix, product planning, and the effects of the demographic dimension on the consumer market.

MKT 102 Principles of Selling   3 Credits
Prerequisites: Demonstrated competency through appropriate assessment or earning a grade of "C" or better in ENG 025, ENG 032 and MAT 044. Provides an overview of the selling process. Includes the psychology of selling and develops skills through a series of selling situations.

MKT 104 Promotion Management   3 Credits
Prerequisites: Demonstrated competency through appropriate assessment or earning a grade of "C" or better in ENG 025, ENG 032 and MAT 044. Presents management planning and oversight techniques for effectively communicating the results of the marketing strategy to customers. Provides a comprehensive overview of promotion methods as they interact in the marketing mix, which includes price, channel of distribution, and product.

MKT 110 Consumer Behavior   3 Credits
Prerequisites: MKT 101. Study of the basic principles of consumer behavior which offers insight into the buyer-seller relationship. Application of theories from psychology, social psychology and economics are examined. Course examines concepts that have implications for marketing management decisions.

MKT 201 Introduction to Market Research   3 Credits
Prerequisites: MKT 101 and MAT 111. Presents basic research methods entailing procedures, questionnaire design, data analysis, and effectively communicating research results.

MKT 204 Marketing Management   3 Credits
Prerequisites: ACC 101, BUS 105 and MKT 101. Focuses on the analysis, implementation and control of marketing strategy. Emphasizes the major decisions management faces in its effort to harmonize the objectives and resources of the organization with the needs and opportunities of the marketplace.

MKT 205 Principles of Insurance   3 Credits
Prerequisites: Demonstrated competency through appropriate assessment or earning a grade of "C" or better in ENG 025, ENG 032, and MAT 050. Introduces the risks faced by business fi rms including property, liability and personal losses, and how they are handled. Presents insurance contracts and their uses. Includes an overview of life insurance, health and pension insurance, public policy, government regulations and social insurance.

MKT 213 Marketing in Non-profit Organizations   3 Credits
Prerequisites: MKT 101. Introduces the use of marketing management to persons working in the non-profit environment, with emphasis on the marketing mix and the marketing concept and their specifi c application to the non-profit sector. This class is also designed for marketing majors to understand the growing world of non-profit marketing.

MKT 220 Principles of Retailing   3 Credits
Prerequisites: MKT 101 and MAT 050. Studies retailing concepts and practices, including retail merchandise planning, buying, pricing, promotion, and control in established retail operations. Attention is given to managerial and operational skills.

MKT 221 Real Estate Broker;   3 Credits
Prerequisites: One-year experience as an active licensed Indiana Real Estate Salesperson associated with a licensed Indiana Real Estate Broker. Mathematical competency as stipulated in Indiana Administrative Code (876 IAC 2-11 through 876 IAC 2-14). To prepare the student for taking the State of Indiana real estate broker licensing examination.

MKT 222 Real Estate Sales   3 Credits
Prerequisites: Program Advisor Approval. To prepare the student for taking the State of Indiana Real Estate Salesperson licensing examination.

MKT 223 Residential Appraising I -   5 Credits
Prerequisites: Program Advisor Approval. To substantially prepare the student for taking the State of Indiana licensed trainee residential appraiser examination. After taking this 75-hour classroom course the student must take an additional 15 classroom hours in Uniform Standards (USPAP) before being eligible to sit for the State Trainee examination.

MKT 224 Uniform Standards of Professional Appraisal Practice (USPAP)   1 Credit
Prerequisites: Program Advisor Approval. It is not a requirement to hold a real estate license of any kind. A real estate broker without an appraiser's license must comply with Rule 6 – Standards of Practice to do appraising. Preparation for taking the State of Indiana licensed residential appraiser trainee examination. This supplements MKT 223, in meeting the 90-classroom hour prerequisite for being eligible to sit for the trainee examination.

MKT 225 Residential Appraising II   4 Credits
Prerequisites: Program Advisor Approval. To substantially prepare and enhance appraisal students' basic knowledge of real estate appraisal principals and practices. This course builds upon the basic appraisal coursework for in-depth discipline study and to prepare students for license upgrades.

MKT 240 Internet Marketing   3 Credits
Prerequisites: CIS 101 and MKT 101. Provides an introduction to the Internet as a marketing strategy including product, pricing, communications, and distribution considerations. Profi les Internet users and market segments and reviews the Internet as a primary and secondary marketing research tool as well as a relationship-marketing tool.

MLT 101 Fundamentals of Laboratory Techniques   3 Credits
Prerequisites: Demonstrated competency through appropriate assessment or earning a grade of "C" or better in ENG 025, ENG 032, MAT 050 and program chair approval. Introduces the elementary skills required in the medical laboratory. Subjects covered include: Laboratory math, quality control, pipetting skills, venipuncture techniques, microscopic skills, and infection control.

MLT 102 Routine Analysis Techniques   3 Credits
Prerequisites: Demonstrated competency through appropriate assessment or earning a grade of "C" or better in ENG 025, ENG 032, MAT 050 and Program Advisor Approval. This course deals with the principles,

practices and clinical laboratory techniques associated with the routine analysis of urine.

MLT 103 Laboratory Mathematics — 1 Credit
Prerequisite: Program Advisor Approval. Introduces the mathematical skills required in the medical laboratory. Subjects covered include: review of basic math (fractions, decimals, %), scientific notation, rounding, significant figures, calculations using Beer's Law, metric conversions, solutions, dilutions, serial dilutions, dilution factors, temperature conversions, common logarithms, concentrations of solutions, molarity, normality, specific gravity, and QC calculations.

MLT 196 Introduction to Patient Care and Phlebotomy — 3 Credits
Prerequisites: Demonstrated competency through appropriate assessment or earning a grade of "C" or better in ENG 025 and ENG 032 and program advisor approval. Introduces the student to the health care delivery system, instruction in specimen collection techniques, infection control and safety and applications of communication concepts and stress management.

MLT 197 Clinical Phlebotomy Experience — 3 Credits
Prerequisites: MLT 196. Covers the practice and demonstration of clinical applications of phlebotomy in the clinical setting.

MLT 198 Clinical Phlebotomy Discussion — 1 Credit
Prerequisites: Student must be in good standing and currently enrolled in MLT Program. Designed for students to develop the professional socialization process that is necessary for functioning in a health care setting as well as review routine and special phlebotomy procedure in light of phlebotomist-patient interaction.

MLT 200 Homeostasis Theory and Techniques — 1 Credit
Prerequisites: MLT 205 or Program Advisor Approval. Continues the study of principles and procedures in homeostasis. It introduces procedures which lie outside those routinely performed. Includes clinicopathologic correlations.

MLT 201 Immunology Techniques — 3 Credits
Prerequisites: Program Advisor Approval. Provides the student with a basic understanding of the principles of the human immunologic system as well as an understanding of, and experience in, routine testing.

MLT 202 Immunohematology Techniques — 3 Credits
Prerequisites: MLT 201 and Program Advisor Approval. Provides instruction on the principles, practice, and procedures used for blood banking in the clinical laboratory.

MLT 205 Hematology Techniques I — 3 Credits
Prerequisites: MLT 101, MLT 102 and Program Advisor Approval. This course presents theory of blood formation and function and routine hematologic procedures, with emphasis upon differentiation of nor-

mal and commonly encountered abnormal blood cells. Also presents clinic pathologic correlations.

MLT 206 Hematology Techniques II — 3 Credits
Prerequisites: MLT 205 and Program Advisor Approval. This course continues the study of principles and procedures in hematology. It introduces procedures which lie outside those routinely performed. Continues cell differentiation, with emphasis upon early and less commonly encountered abnormal cells, with associated special stains. Includes clinic pathologic correlations.

MLT 207 Chemistry Techniques I — 3 Credits
Prerequisites: CHM 101 or CHM 111 and Program Advisor Approval. Presents principles, procedures and clinicopathologic correlations in routine chemical analysis of the blood and other body fluids. Provides laboratory experiences in basic methods, selected to develop routine analytical abilities and to promote the ability to recognize sources of error.

MLT 209 Routine Analysis Applications — 1 Credit
Prerequisites: MLT 102. Provides the student with study of the clinical applications of routine analysis in the hospital laboratory including physical, chemical, and microscopic examination of urine.

MLT 210 Hematology Applications — 3 Credits
Prerequisites: MLT 206 and Program Advisor Approval. Knowledge and skill development pertaining to the principles and techniques of hematology in the hospital laboratory.

MLT 212 Immunology Applications — 1 Credit
Prerequisites: MLT 201 and Program Advisor Approval. Studies and practices the clinical application of serology in the hospital laboratory.

MLT 213 Immunohematology Applications — 3 Credits
Prerequisites: MLT 202 and Program Advisor Approval. Applications of principles and procedures used in blood banking in the hospital laboratory are taught in the clinical laboratory setting.

MLT 215 Parasitology and Mycology — 1 Credit
Prerequisites: MLT 222. Examines the isolation, identification, life cycles and disease processes of pathogenic and opportunistic fungi and parasites.

MLT 218 Clinical Pathology — 3 Credits
Prerequisites: Program Advisor Approval. The course is a review course in preparation for the National Registry Examination and will include current testing procedures, disease conditions, diagnosis, etiologies, clinical symptoms and related laboratory findings.

MLT 221 Clinical Microbiology Applications — 3 Credits
Prerequisites: 222. Provides the student with the study of applications and clinical practices of microbiology found in a clinical laboratory.

MLT 222 Microbiology Techniques — 3 Credits
Prerequisites: Program Advisor Approval. This course will instruct the student in the principles of bacteriology including: gram-negative and gram-positive bacilli and cocci, fastidious organisms and an overview of anaerobic organisms and acid-fast bacteria. Instruction in basic laboratory techniques in clinical bacteriology will also be included.

MLT 224 Chemistry Applications — 3 Credits
Prerequisites: MLT 227. Corequisites: MLT 208. Study and practice of the analytical aspects of clinical chemistry in the hospital laboratory.

MLT 227 Chemistry Techniques II — 2 Credits
Prerequisites: Program Advisor Approval. Continues the study of principles, procedures and clinicopathologic correlations in the chemical analysis of blood and other body fluids. Introduces procedures which lie outside those routinely performed in the clinical chemistry laboratory, including clinicopathologic correlations.

MOR 100 Orientation to Funeral Service — 3 Credits
Prerequisites: Students must be accepted into and enrolled in the Mortuary Science Program. An introduction to funeral service, ancient history, historical development, present funeral practices, values of funeral service, personal qualifications, ethics. Field trips to investigate current problem areas in funeral service are required.

MOR 101 Grief Psychology for Funeral Service — 3 Credits
Prerequisites: Students must be accepted into and enrolled in the Mortuary Science Program. An examination of theory and management of grief, the process of mourning, and the value of the funeral service in bereavement. Grief reactions according to age and special types of loss will be examined. In addition, the course will cover the funeral director's professional responsibilities to the families he or she serves.

MOR 102 Mortuary Law — 3 Credits
Prerequisites: Students must be accepted into and enrolled in the Mortuary Science Program. Principles of mortuary law; duties, rights and liabilities for final disposition. Business law; public and personal liability; business organization; licensing and zoning regulations. Probate proceedings, social security, and life insurance benefits, and ethical standards relating to funeral service.

MOR 103 Embalming Chemistry — 3 Credits
Prerequisites: Students must be accepted into and enrolled in the Mortuary Science Program. Fundamentals of inorganic, organic, and biochemistry. Also chemistry of the human body, chemistry changes following death, toxicology, disinfection, and embalming chemicals. Basic principles of chemistry related to funeral service.

MOR 104 Funeral Service Equipment — 3 Credits
Prerequisites: None. Designed to give the student a working knowl-

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edge of equipment items, manufacturing and use of such items. Presents a thorough study of caskets and vaults. Uses field trips and guest lecturers as learning tools. The curriculum is divided into two sections. The first covers construction and features of caskets, outer burial containers, and other funeral related products. The second section of the curriculum examines methods of purchasing, pricing, display, and sale of funeral merchandise as well as funeral services.

MOR 202 Funeral Management 3 Credits
Prerequisites: MAT 111 and MOR 104. Corequisites: ACC 101, BUS 101 and COM 102. Current practices and procedures, funeral direction, psychological and sociological aspects of funeral service, funeral home operation, professional overview and image, professional regulations and effective personnel management.

MOR 206 Embalming Theory 3 Credits
Prerequisites: None. Corequisites: MOR 207 and MOR 209. An introduction of basic vocabulary utilized by the professional embalmer. The purposes of embalming, as well as responsibilities, conduct, qualities of the professional embalmer is discussed. An inventory of typical preparation room instruments and supplies is examined. All aspects of embalming are studied including contemporary methods and techniques.

MOR 207 Embalming Practicum I 3 Credits
Prerequisites: None. Corequisites: MOR 206 and MOR 209. One laboratory session per week for one semester in an appropriate mortuary setting. Practical experience in all phases of funeral service including embalming, funeral directing, and funeral home operation. Students are placed in local funeral homes to work under the direct supervision of a qualified licensed embalmer to gain knowledge of procedures used in embalming human remains for funeral services. MOR 206 will work in conjunction with the practical experience.

MOR 208 Pathology for Funeral Service 3 Credits
Prerequisites: ANP 102, MOR 103 and BIO 211. Divisions and importance of pathology, nature and causes of disease, to include inflammation, repair and recuperation of tissue, tumors, disease of the heart, respiratory and digestive systems are covered as well as microscopic examination of autopsy and surgical specimens, with particular emphasis on those conditions which relate to or affect the embalming or restorative art process.

MOR 209 Restorative Art 3 Credits
Prerequisites: None. Corequisites: MOR 206 and MOR 207. The study of facial anatomy, color relationships, and restorations. Development of skills in anatomical modeling and cosmetics.

MOR 217 Embalming Practicum II 3 Credits
Prerequisites: MOR 103, MOR 206, MOR 207, MOR 209, ANP 102 and

BIO 211. Students work in a local approved funeral home under the direct supervision of a licensed embalmer. Develops practical embalming skills, combining work experience in funeral home. The student will work (8-10 hours) per week in the funeral home.

MRT 107 Motorcycle Engine Principles and Design 3 Credits
Prerequisites: None. Introduces engine dynamics, theory of engine operation and characteristics of engine design. Studies R & R, visual inspection, precision measuring, gaskets, lubricants, sealants, coolants of modern engines, and engine service.

MRT 127 Motorcycle Engine Service and Repair 3 Credits
Prerequisites: None. Studies precision tools, equipment, and procedures needed to repair today's modern engine. Repair, proper assemble, and installation techniques applicable to the modern engine are included.

MRT 173 Motorcycle Transmission/Drive Service and Repair 3 Credits
Prerequisites: None. Studies theory and operation, diagnosis, testing and repair of motorcycle transmissions and drivelines.

MRT 174 Motorcycle Frame and Electrical System 3 Credits
Prerequisites: None. Introduces the fundamentals and principles of motorcycle electronics and diagnosis. Extensive use of digital multimeters and circuit troubleshooting is covered. Emphasis is placed on reading and understanding wiring diagrams and symbols. Diagnosing, starting, and charging systems are also covered.

MRT 270 Motorcycle High Performance 3 Credits
Prerequisites: None. Covers the fundamentals, construction, components and design of high performance motorcycles for various racing venues. The course will also cover related systems; cooling, lubrication, suspension and braking. Students will study the theory, design and requirements of high performance engines/systems. Emphasis in this course is placed on bolt on performance modifications.

MTT 101 Introduction to Machining 3 Credits
Prerequisites: None. Instructs the student in shop safety, industrial terminology, tools and machine tooling, measurement and layout. Includes laboratory exercises to begin project completion of turning, milling, and grinding applications.

MTT 102 Turning Processes I 3 Credits
Prerequisites: None. Instructs students in shop safety, industrial terminology, and provide laboratory experience toward project completion on the conventional lathe.

MTT 103 Milling Processes I 3 Credits
Prerequisites: None. Instructs students in shop safety and industrial

terminology and provides laboratory experience toward project completion on the vertical and/or horizontal milling machine.

MTT 104 Machinery Handbook 3 Credits
Prerequisites: None. Explores the intent and use of the machinery handbook. Applies principles and concepts in the machinery handbook to projects in the industry.

MTT 105 Abrasive Processes I 3 Credits
Prerequisites: None. Provides shop safety, industrial terminology, and laboratory experiences on abrasive processing machines. Includes super abrasives technology processes.

MTT 106 Print Interpretation 3 Credits
Prerequisites: None. Applies mathematics in solving engineering and design related problems in the areas of die design, fabrication, assembly, special machinery, die casting and molds. Emphasizes GDT tolerancing.

MTT 110 Turning and Milling Processes 3 Credits
Prerequisites: None. Provides shop safety, industrial terminology and laboratory experiences on conventional lathe and milling machines.

MTT 202 Advanced Turning Processes II 3 Credits
Prerequisites: MTT 102 or MTT 110. Advanced training in shop safety and industrial terminology utilizing the conventional engine lathe.

MTT 203 Milling Processes II 3 Credits
Prerequisites: MTT 103 or MTT 110. Covers shop safety, industrial terminology, and provide advanced laboratory experience towards project completion on the vertical and/or horizontal milling machine.

MTT 205 Abrasive Processes II 3 Credits
Prerequisites: MTT 105. Continuing emphasis on shop safety, industrial terminology, and advanced laboratory experience towards project completion on a variety of abrasive processing machines.

MTT 206 Tooling Design I 3 Credits
Prerequisites: MTT 110 and MTT 105 or MTT 102 and MTT 103 and MTT 105. Introduces concepts of tooling design, assembly, and standards of fabrication. Emphasizes jig and fixture design/components, application and operational characteristics.

MTT 207 Tooling Design II 3 Credits
Prerequisites: MTT 105 and MTT 110. Covers concepts of complex tooling design. Emphasizes forming, blanking, piercing and progressive type die design. Includes die applications, components, manufacture and assembly techniques.

MTT 208 CNC Programming I 3 Credits
Prerequisites: Program Advisor Approval. Introduces two and three axis CNC machining. Develops the theory of programming in the classroom with applications of the program accomplished on industry-

type machines. Studies terminology of coordinates, cutter paths, angle cutting, and linear and circular interpolation.

MTT 209 CNC Programming II 3 Credits
Prerequisites: MTT 208. Provides further study in computer-aided numerical control programming. Focuses on canned cycles, loops, macros, thread cycles, drilling, and pocket milling cycles.

MTT 210 Interactive CNC 3 Credits
Prerequisites: MTT 208. Introduces advanced applications of computer assisted part programming and simulation, language codes setup and operation, troubleshooting, and problem solving in a CNC turning center and CNC machining center. Includes related mathematical sills.

MTT 211 Advanced Programming Techniques 3 Credits
Prerequisites: MTT 210. Includes the application of advanced CNC programming techniques to industrial machining. Using down loading and up loading techniques utilized through advanced projects.

MTT 220 CAD/CAM I 3 Credits
Prerequisites: MTT 208. Covers the development of various machine routines. Introduces computer-assisted machining as it relates to automated milling and machining centers. Emphasizes proper programming techniques, control familiarity, file data and machining functions.

MTT 221 CAD/CAM II 3 Credits
Prerequisites: MTT 220. Covers the development of 3-D shapes and the codes necessary to produce parts. Requires student to design a new product or modify an existing design. Includes creating surface curves. Focuses on creating tool paths for complex 3-D surfaces.

MTT 225 Introduction to Mold Making 3 Credits
Prerequisites: MTT 110. Introduces the student to the basic fundamentals or mold design and construction. The processes and basic construction of plastic molds, molds for die-castings and rubber molds are discussed. Each student in the class will design, build and inject their mold(s).

MTT 240 Machine Operations I 3 Credits
Prerequisites: MTT 102 and MTT 103. Students will gain additional classroom experience concerning band saws, engine lathes, vertical mills, surface grinders, Harig® Grinding Fixture, and jig grinder. Measurement and layout will be performed at an advanced level. Classroom activities will concentrate on heat-treatment of tool steels, classes of ANSI fits and tolerances, electrical discharge machining, carbide tooling and basic metal stamping die theory. Experience will also be gained in the calculation of labor and material costs. In addition, students will also be introduced to metal stamping die construction and conversational programming on CNC vertical mills. Students will also be required to create a comprehensive notebook due at the end of the semester.

MTT 241 Machine Operations II 3 Credits
Prerequisites: MTT 240. Emphasizes basic tool construction and close tolerance machining. Using the various types of equipment found in the laboratory, students rough machine, heat treat and precision grind detail parts to tolerance within 0.0005 consistently. Classroom activities concentrate on precision setup, inspection work and basic tool construction. Experience is gained in basic conversational CNC programming.

MTT 242 CNC Machining 3 Credits
Prerequisites: MTT 208. Introduces and instructs the student in all aspects of Computer Numeric Control (CNC) machining. The student will program, set up and operate CNC mills and lathes utilizing CAD/CAM for fixture and part design and verification. Students continually improve programming, set up and cycle time efficiency. Students inspect and document the quality of production parts and compare their performance with an industry benchmark for each project.

MTT 243 Tool and Die Making I 3 Credits
Prerequisites: MTT 101 and MTT 110 and MTT 208 or MTT 101 and MTT 102 and MTT 103 and MTT 208. Focuses on construction of a two-stage progressive die that incorporates interchangeable details. Each student manufactures a die that incorporates the parting principle and performs the following operations: Forming, Piercing, and Parting. In addition lecture material covers computations on blank lengths, and diameters, blanking and piercing operations, drawing, progression, and timing. Experience is gained in CNC machining and progressive die troubleshooting.

NSG 100 Fundamentals of Nursing 3 credits
Prerequisites: Admission to a Nursing Program. Corequisites: NSG 101. Examines the roles of the licensed practical nurse and the registered nurse as members of the health care team. Provides an overview of the five components of the nursing process. Explores the nurse's role in providing for basic physiological, psychosocial, cultural, intellectual, and spiritual needs of patients. Introduces fundamental principles of therapeutic communication and teaching/learning.

NSG 101 Fundamentals of Nursing Lab 1 credit
Prerequisites: Admission to a Nursing Program. Corequisites: NSG 100. Simulated patient care provides an opportunity to develop the psychomotor skills necessary to provide nursing care to meet basic patient needs. Emphasis is placed on the use of standard precautions, provision of a safe care environment, and maintenance of patient privacy. Through simulation, basic principles of documentation are practiced.

NSG 102 Medical-Surgical Nursing I 2 credits
Prerequisites: NSG 100 and NSG 101. Corequisites: NSG 103 and NSG

105. Emphasizes the assessment component of the nursing process. Introduces data analysis and nursing diagnosis. Examines the etiology, pathophysiology, clinical manifestations, and diagnostic testing of common alterations in health within the context of all body systems. Introduces mental health concepts and therapeutic communications/milieu management.

NSG 103 Medical-Surgical Nursing I Lab 2 credits
Prerequisites: NSG 100 and NSG 101. Corequisites: NSG 102 and NSG 105. Simulated patient care provides an opportunity to develop progressively complex nursing skills. Emphasis is placed on sterile technique, airway maintenance, nutritional and fluid support, elimination devices, specimen collection, medication administration, and drug dosage calculations.

NSG 105 Medical-Surgical Nursing I Clinical 2 credits
Prerequisites: NSG 100 and NSG 101. Corequisites: NSG 102 and NSG 103. Provides the opportunity to apply nursing skills in diverse patient care situations. Emphasizes assessment skills in determining patient health status. Applies knowledge of etiology, pathophysiology, diagnostic tests, and assessment findings to identify patient needs.

NSG 106 Pharmacology for Nursing 3 credits
Prerequisites: Admission to a Nursing Program or Program Chair Approval. Introduces principles of pharmacotherapeutics, pharmacodynamics, and pharmacokinetics in relation to the major drug classifications. Utilizes the nursing process to explore pharmacologic aspects of patient care.

NSG 108 Transition for the Paramedic to the Associate of Science in Nursing 5 credits
Prerequisites: Admission to the Associate of Science of Nursing Program. Corequisites: NSG 109. Examines the transition to the role of the registered nurse. Identifies components of the nursing program philosophy. Provides an overview of the five components of the nursing process, emphasizes the assessment component. Introduces data analysis and nursing diagnoses. Reviews etiology, pathophysiology, clinical manifestations, and the diagnostic testing of common alterations in health within the context of all body systems. Introduces mental health concepts and therapeutic communications / milieu management.

NSG 109 Transition for the Paramedic to the Associate Science in Nursing Lab/Clinical 3 credits
Prerequisites: Admission to a Nursing Program. Corequisites: NSG 108. Provides the paramedic the opportunity to transition into the role of the associate degree nurse. Allows the opportunity to apply theoretical knowledge to provide ethical, culturally competent, and holistic care for adults experiencing non-complex alterations in health. Emphasis is placed on the prevention of illness and the maintenance, promotion and restoration of health, as well as the support of death

with dignity and implementation of the ordered treatment plan. The nursing process provides the framework for problem solving and critical thinking in providing nursing care. Laboratory and clinical experiences are provided to assist the student in identifying appropriate nursing interventions for health needs.

NSG 110 Medical Surgical Nursing II   3 credits
Prerequisites: NSG 102 NSG 103, NSG 105, and NSG 106. Corequisites: NSG 111. Provides an understanding of the health care needs of adults experiencing non-complex alterations in health within the context of all body systems. Examines the roles of the licensed practical nurse and the registered nurse in applying the nursing process and implementing the ordered plan of treatment.

NSG 111 Medical Surgical Nursing II Clinical   2 credits
Prerequisites: NSG 102, NSG 103, NSG 105, and NSG 106. Corequisites: NSG 110. Allows the opportunity to apply theoretical knowledge to provide ethical, culturally competent, and holistic care for adults experiencing non-complex alterations in health. Emphasis is placed on the prevention of illness and the maintenance, promotion and restoration of health, as well as the support of death with dignity and implementation of the ordered treatment plan. The nursing process provides the framework for problem solving and critical thinking in providing nursing care.

NSG 112 Maternal-Child Nursing   3 credits
Prerequisites: NSG 102, NSG 103, NSG 105, and NSG 106. Corequisites: NSG 113. Applies knowledge of etiology and pathophysiology to provide an understanding of the health care needs of children and childbearing families. Examines the roles of the licensed practical nurse and the registered nurse in applying the nursing process and implementing the ordered plan of treatment for childbearing and childrearing families. Introduces growth and development components and how they impact therapeutic communication, therapeutic interventions, and teaching-learning techniques when providing nursing care to children and child-rearing families.

NSG 113 Maternal-Child Nursing Clinical   2 credits
Prerequisites: NSG 102, NSG 103, NSG 105, and NSG 106. Corequisites: NSG 112. Allows the opportunity to apply theoretical knowledge to provide ethical, culturally competent, and holistic care for children and childbearing families. Emphasis is placed on the prevention of illness and the maintenance, promotion, and restoration of health as well as the support of death with dignity and implementation of the ordered plan of treatment. Knowledge of principles of growth and development are utilized to adapt therapeutic communication, therapeutic intervention, and teaching-learning techniques to provide nursing care to children and childrearing families. The nursing process provides the framework for problem solving and critical thinking in providing nursing care.

NSG 114 Health Care Concepts in Nursing   1 credit
Prerequisites: NSG 102, NSG 103, and NSG 105. Explores strategies utilized to promote lifelong personal and professional development. Analyzes the roles of the licensed practical nurse and the registered nurses within the context of the larger healthcare environment. Examines internal and external influences on nursing practice. Explores basic concepts of nursing leadership and management. Analyzes legal and ethical issues in healthcare.

**NSG 116 Geriatric/Complex Medical Surgical
Nursing III for the Practical Nurse   4 credits**
Prerequisites: Admission to the Practical Nursing Program, NSG 110, and NSG 111. Corequisites: NSG 117. Applies previous knowledge of etiology and pathophysiology to provide an understanding of the health care needs of adults experiencing complex alterations in health within the context of all body systems. Examines the role of the practical nurse in the acute care and long-term care setting. Relates principles of growth and development to the needs of geriatric patients. Examines leadership skills in the geriatric setting.

**NSG 117 Geriatric/Complex Medical Surgical
Nursing III for the Practical Nurse Clinical   2 credits**
Prerequisites: Admission to the Practical Nursing Program, NSG 110 and NSG 111. Corequisites: NSG 116. Allows the opportunity to apply theoretical knowledge to provide ethical, culturally competent, and holistic care for adults within the context of all body systems. Emphasis is placed on the prevention of illness and the maintenance, promotion and restoration of health, as well as the support of death with dignity and implementation of the ordered plan of treatment. The nursing process provides the framework for problem solving and critical thinking in providing nursing care. Leadership activities for practical nurses in the long term care setting are explored.

**NSG 120 Transition to Associate of Science
Nursing for the LPN   5 credits**
Prerequisites: Admission to the ASN Program. Corequisite: NSG 106. Examines the role of the registered nurse. Identifies components of the nursing program philosophy. Reviews etiology, pathophysiology, clinical manifestations, and the diagnostic testing of common alterations in health within the context of all body systems. The nursing process will guide the student in analyzing the care of the adult and maternal child patients with noncomplex health disorders. Emphasis will be placed on assessment skills. Laboratory experience is provided to perform basic nursing skills and assist the student in identifying appropriate nursing responses to health needs.

**NSG 200 Complex Medical-Surgical Nursing
for the ASN   3 credits**
Prerequisites: Admission to the ASN Program, NSG, NSG 111, NSG 112, and NSG 113; or Admission to the ASN Program, NSG 108, NSG 109,

NSG 112, and NSG 113; or Admission to the ASN Program, and NSG 120. Corequisites: NSG 201. Applies previous knowledge of the etiology and pathophysiology of complex alterations in health in understanding the patient's health care needs within the context of all body systems. Examines the role of the registered nurse in applying the nursing process and implementing the ordered plan of treatment in acute care settings. Examines leadership skills in a variety of healthcare settings.

**NSG 201 Complex Medical Surgical Nursing
for the ASN Clinical   4 credits**
Prerequisites: Admission to the ASN Program, NSG 110, NSG 111, NSG 112, and NSG 113; or Admission to the ASN Program, NSG 108, NSG 109, NSG 112, and NSG 113 Maternal-Child Nursing Clinical; or Admission to the ASN Program, and NSG 120. Corequisites: NSG 200. Allows the opportunity to apply theoretical knowledge to provide ethical, culturally competent, and holistic care for adults experiencing complex alterations in health within the context of all body systems. Emphasis is placed on the prevention of illness and the maintenance, promotion and restoration of health, as well as the support of death with dignity and implementation of the ordered plan of treatment. The nursing process provides the framework for problem solving and critical thinking in providing nursing care. Leadership concepts utilized in the management of direct patient care are explored.

NSG 202 Nursing Care of the Complex Family   2 credits
Prerequisites: Admission to the ASN Program, NSG 110, NSG 111, NSG 112, and NSG 113; or Admission to the ASN Program, NSG 108, NSG 109, NSG 112, and NSG 113; or Admission to the ASN Program, and NSG 120. Corequisites: NSG 203. Explores the theoretical concepts of growth and development, family nursing, and health promotion across the lifespan. Examines the role of the registered nurse in applying the nursing process and in implementing the ordered plan of treatment for families experiencing complex health problems. Identifies community health resources. Discusses the issues of obstetrical and high-risk neonatal emergencies, family violence, acute life threatening illnesses, and chronic debilitating illnesses. Analyzes the needs of the geriatric patient.

**NSG 203 Nursing Care of the Complex
Family Clinical   2 credits**
Prerequisites: Admission to the ASN Program, NSG 110, NSG 111, NSG 112, and NSG 113; or Admission to the ASN Program, NSG 108, NSG 109, NSG 112, and NSG 113; or Admission to the ASN Program, and NSG 120. Corequisites: NSG 202. Allows the opportunity to apply theoretical knowledge to provide ethical, culturally competent, and holistic care with the focus on family coping and adaptation across the lifespan. Emphasis is placed on the prevention of illness and the maintenance, promotion, and restoration of health as well as the support of death with dignity, and implementation of the ordered plan of

treatment for families experiencing complex health problems. The nursing process provides the framework for problem solving and critical thinking in providing nursing care.

NSG 204 Psychiatric Nursing 2 credits
Prerequisites: Admission to the ASN Program, NSG 110, NSG 111, NSG 112, and NSG 113; or Admission to the ASN Program, NSG 108, NSG 109, NSG 112, and NSG 113; or Admission to the ASN Program, and NSG 120. Corequisites: NSG 205. Builds upon previous knowledge of mental health concepts to provide an understanding of psychiatric and behavioral disorders. Examines the role of the registered nurse in applying the nursing process to the care of individuals in the psychiatric setting. Explores the ordered plan of treatment for psychiatric and behavioral disorders. Identifies the registered nurse's accountability for the legal and ethical issues inherent in psychiatric nursing.

NSG 205 Psychiatric Nursing Clinical 1 credit
Prerequisites: Admission to the ASN Program, NSG, NSG 111, NSG 112, and NSG 113; or Admission to the ASN Program, NSG 108, NSG 109, NSG 112, and NSG 113; or Admission to the ASN Program, and NSG 120. Corequisites: NSG 204. Allows the opportunity to apply theoretical knowledge to provide ethical, culturally competent, and holistic care for individuals experiencing psychiatric and behavioral disorders. The nursing process provides the framework for problem solving and critical thinking in nursing care.

NSG 253 Nursing Related to Developmental Needs Practicum 4 credits
Prerequisites: NUR 152 and NUR 153 or NUR 248. Provides experiences that allow the student to further refine the role of the associate degree nurse when providing care to meet the developmental needs of childbearing and childrearing families including the maintenance of conditions to support life processes and maturation. The nursing process guides the application of scientific facts, concepts, principles, and rationales in the delivery of nursing care. Decision making and therapeutic communication are also emphasized.

OAD 009 Introduction to Keyboarding 3 Credits
Prerequisites: None. Introduces the use of the keyboard. Touch-typing skills, manual dexterity, and speed development are cultivated using computers.

OAD 019 Keyboarding 3 Credits
Prerequisites: None. Provides students with the fundamentals of keyboarding using the touch method. Emphasizes mastery of the keyboard, development of formatting skills, and development of speed and accuracy on a personal computer using an up-to-date software package.

OAD 029 Speed and Accuracy Development 1 Credit
Prerequisites: OAD 019. Designed to diagnose individual keyboarding speed and accuracy skills and bring those skills to an employable level.

OAD 103 Introduction to Computers with Word Processing 3 Credits
Prerequisites: Typing proficiency of 30 gwam. Introduces the concepts of word processing systems. Offers hands-on experience in the operation of a specific word processing software package.

OAD 108 Shorthand/Notetaking I 3 Credits
Prerequisites: None. Introduces basic principles of a note-taking system. Emphasis is placed on note-taking techniques, legibility, and mastery of the basic vocabulary. Dictation and transcription of material is included.

OAD 110 Presentation Graphics 3 Credits
Prerequisites: None. Provides hands-on experience and familiarizes students with specific advanced design and layout techniques and practical applications of business presentations.

OAD 113 Medical Coding 3 Credits
Prerequisites: HHS 101. Addresses basic CPT coding concept guidelines including learning to use documented information and basic ICD-9 coding guidelines including how to extract information from medical charts. (For campuses that do not have an MEA program.)

OAD 114 Desktop Publishing 3 Credits
Prerequisites: OAD 103. Emphasizes the production of publication-quality documents. Attention is given to design and layout principles and production techniques. Fonts, graphics, and page composition are integrated into camera-ready documents using computer software and hardware.

OAD 115 Computer Concepts for the Medical Office 3 Credits
Prerequisites: Program Advisor Approval. Familiarizes the student with computer applications in the health care setting. Designed to provide the student with basic operations and applications of computer usage within the health care provider office. Applies the use of a computerized account management software.

OAD 116 Essentials of Business Correspondence 3 Credits
Prerequisites: Demonstrated competency through appropriate assessment or earning a grade of "C" or better in ENG 025. An intensive, competency-based business correspondence course that involves grammar, word usage, pronunciation, punctuation, proofreading, spelling, vocabulary building, and other language skills that is essential to good workplace communication.

OAD 119 Document Processing 3 Credits
Prerequisites: Entry-level proficiency of 35 gross words per minute on a three-minute timed writing with three or fewer errors or OAD 019.

Emphasis is placed on increasing speed, improving accuracy, developing and applying formatting skills, applying communication and language arts skills, and developing document production techniques on a personal computer using an up-to-date word processing software package.

OAD 121 Office Procedures and Team Dynamics 3 Credits
Prerequisites: OAD 019. Prepares the student to understand and carry out responsibilities assigned in a business office. Topics include telephone techniques, office equipment, travel and conference arrangements, professional development, research techniques, time and stress management, and business ethics.

OAD 130 Quality and Customer Service 3 Credits
Prerequisites: Demonstrated competency through appropriate assessment or earning a grade of "C" or better in ENG 025 and ENG 032. Examines and addresses issues of quality and customer service faced by organizations. Explores evolving philosophies, definition, development and application. Includes examination of current applications in administration.

OAD 204 Outlook 2003 3 Credits
Prerequisites: CIS 101. Provides students with the ability to utilize email components. Topics include managing schedules, managing folders and contacts, organizing work using tasks and notes, and customizing and using advanced email features.

OAD 207 Integrated Applications 3 Credits
Prerequisites: Demonstrates competency through appropriate assessment or successful completion of CIS 101. Explore the advanced features of an integrated office software package using word processing, spreadsheets, database, and presentation graphics.

OAD 208 Shorthand/Notetaking II 3 Credits
Prerequisites: OAD 108. Develop dictation, notetaking and transcription skills through drills and tests. Emphasizes speed, accuracy and use of correct English. Reinforces and builds on principles and skills learned in Shorthand/Notetaking I.

OAD 211 Medical Transcription I 3 Credits
Prerequisites: HHS 101 and OAD 119 with an entry level speed of 40 GWAM on a 5-minute timed writing with a 5 error limit. Develop skills and knowledge of medical transcription, utilizing medical reports, terminology, and correspondence.

OAD 212 Medical Transcription II 3 Credits
Prerequisites: MEA 135 or OAD 211. Develops transcription skills using medical documents such as office chart notes, letters, initial office evaluations, history and physicals, consultations, emergency room reports, and discharge summaries for various medical specialties.

OAD 213 Professional Medical Coding 3 Credits
Prerequisites: OAD 113. Addresses advanced CPT coding concept

guidelines including learning to use documented information and advanced ICD-9 coding guidelines including how to extract information from medical charts. Emphasis is given to surgical coding in the course.

OAD 214 Multimedia Design   3 Credits
Prerequisites: OAD 103. Create multimedia presentations for primary delivery via the Internet. Attention is given to design and layout principles and production techniques. Color and editing graphics and photographs will be introduced. Students will also apply their design skills to preparing documents for electronic publishing on the World Wide Web.

OAD 215 Legal Transcription   3 Credits
Prerequisites: OAD 119, with an entry-level speed of 40 gross words a minute on a 5-minute timed writing with a five-error limit. Provides hands-on training in formatting legal correspondence and court documents in the basic areas of law. Students will learn specialized rules of punctuation, terminology, and standards for legal documents. In a laboratory setting, students will learn how to use a transcribing machine to produce legal documents from tape dictation.

OAD 216 Business Communications   3 Credits
Prerequisites: ENG 111. Emphasizes analysis of business communication environments-cultural, organizational, technological, international, and interpersonal-and the use of communications standards to direct the choice of oral and written communication methods and techniques. It includes practice in writing a variety of messages used to communicate in business and industry with an emphasis on the potential impact of the message on the receiver as a basis for planning and delivering effective business communications.

OAD 217 Problem Solving for Computer Users   3 Credits
Prerequisites: Advisor Approval. Introduces the organization, structure, and functions necessary for managing and maintaining information systems within a business organization. Presents the student with basic computer system concepts such as file and resource management, device drivers, file structures, hard disk organization, software installation, upgrading and maintenance, and fundamental data security techniques. These concepts will be incorporated into practical applications.

OAD 218 Spreadsheets   3 Credits
Prerequisites: Demonstrated competency through appropriate assessment or earning a grade of "C" or better in MAT 050. Provides an in-depth understanding of worksheet design, charting, what-if analysis, worksheet database creation and manipulation, and OLE. Knowledge and use of a spreadsheet will be applied to various business applications. Integration of spreadsheets in other applications will be addressed.

OAD 219 Advanced Document Processing   3 Credits
Prerequisites: OAD 119 or equivalent. Emphasis on a high degree of competency in an office-like environment processing documents on a personal computer using an up-to-date word processing software package.

OAD 220 Records and Database Management   3 Credits
Prerequisites: Demonstrated competency through appropriate assessment or earning a grade of "C" or better in ENG 025 and ENG 032. Focuses on the management and control of documents from creation to disposition using manual, automated, and electronic media. Examines filing procedures, records management personnel, and equipment. Uses database software to create, modify, query, and report information from a database.

OAD 221 Organizational Leadership   3 Credits
Prerequisites: OAD 216 and Advisor Approval. Emphasizes management of office functions. Key topics include personnel, team building, ergonomics, project management, and leadership styles. Case studies and role-playing projects are included. Students will also complete the program and College outcomes assessment tools.

OAD 222 Database Applications   3 Credits
Prerequisites: Demonstrated competency through appropriate assessment or earning a grade of "C" or better in ENG 025 and ENG 032. Provides "hands-on" experience and familiarizes students with the creation and management of a database.

OAD 226 Advanced Electronic Spreadsheets   3 Credits
Prerequisites: OAD 218. Continues the study of electronic spreadsheets in business. Emphasizes the advanced application of electronic spreadsheets.

OAD 280 Co-op/Internship/Externship   3 Credits
Prerequisites: Program Advisor Approval. Provides students with the opportunity to work for an organization that is specifically related to their career objectives. Provides on-the-job experience while earning credit.

OPM 102 Techniques of Supervision   3 Credits
Prerequisites: None. Demonstrated competency through appropriate assessment or earning a grade of "C" or better in ENG 025 and ENG 032. Introduces basic employee development with emphasis on the responsibilities of a newly-appointed supervisor. Emphasizes organizational structure, motivation, delegation of authority, interviews, orientation and induction of new employees, employee performance evaluations and dealing with employee conflict.

OPM 205 Techniques of Leadership   3 Credits
Prerequisites: OPM 102. Identifies approaches to effective leadership and discovers an appropriate personal leadership style. Explores specific qualities and skills needed for conference leadership (organizing, facilitating, controlling, summarizing, speaking, and problem defining and solving).

OPM 211 Labor Relations   3 Credits
Prerequisites: BUS 101 and BUS 102. This is a second-year elective course in labor-management relations. Examines labor history, major labor legislation, collective bargaining, grievance procedure/arbitration, wage issues and economic supplements e.g."fringe benefits." Students will obtain the knowledge and skills necessary for functioning effectively in an organized – particularly an industrial –environment.

OPM 224 Operations Management   3 Credits
Prerequisites: MAT 111 or higher. A study of the efficient production of goods and services that will satisfy the wants and needs of identified customer groups. The course begins with a more detailed description of what Operations Management is, then moves to an examination of the customer and methods for determining customer demand.

PAR 102 Emergency Medical Technician - Basic Training   7.5 Credits
Prerequisites: Completion of the ASSET or COMPASS, 18 years of age prior to course completion, copy of high school diploma or GED must be supplied by course completion, completion of the College Health Examination Form and required immunizations and tests, regionally determined, current Health Care Provider CPR card. Based on the training program developed by the Department of Transportation and the Emergency Medical Services Commission of Indiana. Covers theories, techniques and operational aspects of pre-hospital emergency care within the scope and responsibility of the basic emergency medical technician (EMT-B). Requires laboratory practice and clinical observation in a hospital emergency room and ambulance. Successful completion of the course meets Indiana requirements to test for certification as an EMT-B.

PAR 111 Preparatory   3 Credits
Prerequisites: Demonstrated competency through appropriate assessment or earning a grade of "C" or better in ENG 025, ENG 032, MAT 050, certification, or pending, as an EMT – B, course application and physical exam on file, completion of the College Health Examination Form and regionally required immunizations and tests, successful completion of entrance requirements as determined by regional affiliates. The legal, moral and ethical responsibilities of the health care professional are introduced. An overview of the Emergency Medical Services System and its components and their relationships is presented. The essential principles of the standard of care, medical liability, areas of potential medical liability and medical liability protection are introduced. An overview of stress, reactions to stress, anxiety, paramedic job stress and dealing with death and dying is discussed. The essentials of pathophysiology and how the understanding of disease processes will improve upon the level of care provided by the paramedic are explained.

PAR 112 Prehospital Pharmacology   3 Credits
Prerequisites: PAR 111. The introduction of drug information, action of drugs, weights and measures and the administration and techniques of administering drugs. The essentials of venous access, therapeutic communications and lifespan development are also included.

PAR 115 Airway, Patient Assessment   3.5 Credits
Prerequisites: PAR 114 and ANP 101. The fundamentals of airway management including airway anatomy and physiology, assessment, management, ventilation, and suction are emphasized. General patient assessment, initial management including scene survey, initial assessment, resuscitation, focused/detailed exam, history, definitive field management, and re-evaluation are also introduced.

PAR 116 Clinical I   1.5 Credits
Prerequisites: PAR 114. Provides experiences in a hospital environment or other medical setting under supervision. Provides the opportunity to practice and perform patient assessment, endotracheal intubation, intravenous access techniques, and therapeutic communication techniques in the emergency department, surgery, and other appropriate clinical areas.

PAR 210 Medical I   6 Credits
Prerequisites: PAR 200. Pulmonology, respiratory management and pharmacological interventions are covered in detail. Cardiology and dysrhythmia recognition relative to pre-hospital intervention are emphasized. Advanced Cardiac Life Support (ACLS) certification must be earned during this course.

PAR 213 Medical II   5 Credits
Prerequisites: PAR 210 and ANP 102. Etiology and treatment of medical emergencies associated with the nervous, endocrine and reproductive systems are reviewed. The course includes presentation of allergies and anaphylaxis, gastroenterology, toxicology, infectious and communicable diseases, environmental conditions and behavioral and psychiatric disorder.

PAR 215 Special Considerations   3.5 Credits
Prerequisites: PAR 213. Pediatrics, geriatrics and interventions for the chronic care patient and assessment based management are covered. Neonatal Resuscitation Provider (NRP) certification and Pediatrics Advanced Life Support (PALS) certification must be earned during this class.

PAR 216 Clinical II   1.5 Credits
Prerequisites: PAR 116. Provides experiences in a hospital environment or other medical setting under supervision. Provides the opportunity to practice and perform patient assessment, endotracheal intubation, suctioning of upper and lower airway, delivery of aerosolized medications, administration of medications via various enteral and parenteral routes, intravenous access techniques, interpretation of electrocardiogram tracings, and therapeutic communication techniques in the emergency department, critical care units, behavioral units, and other appropriate clinical areas.

PAR 219 Clinical III   1.5 Credits
Prerequisites: PAR 216. Provides experiences in a hospital environment or other medical setting under supervision. The emphasis is on gaining experience in the management of neonatal, pediatric, and obstetric patients. Provides opportunities to practice assessment, communication and management with patients ranging from neonate to young adult and opportunities to observe live births and perform assessment of obstetric patients are also available. Assessing the critically ill patient and assisting with care in specialty intensive care units and the burn unit is included.

PAR 220 Operations   2.5 Credits
Prerequisites: PAR 213. An awareness of the concepts of rescue and the preparation for a response to a scene/incident is provided. The essentials of crime scene awareness, medical incident command and hazardous materials operations are presented.

PAR 221 Ambulance Internship   6 Credits
Prerequisites: PAR 219. Students will participate in a field internship that provides on the job experience in all phases of prehospital advanced life support. All skills tested by the National Registry Exam will be formally reviewed and practiced. A general review of the total paramedic curriculum will be presented. This is the capstone course of the paramedic curriculum. Student's practical skills experienced through Clinical I, Clinical II, Clinical III, and this course must demonstrate competency in the objectives listed as required by the National Standard Curriculum, DOT, 1998.

PHL 101 Introduction to Philosophy TransferIN 3 Credits
Prerequisites: Demonstrated competency through appropriate assessment or earning a grade of "C" or better in ENG 025 and ENG 032. Introduces the student to recurring ideas and thought systems represented in the literature and lives of great thinkers and examines philosophical principles such as foundations of morality, skepticism, the nature of knowledge, the nature of mind, free will and determinism, and the existence of God. Emphasizes the evaluation of arguments and analysis of concepts.

PHL 102 Introduction to Ethics   TransferIN 3 Credits
Prerequisites: Demonstrated competency through appropriate assessment or earning a grade of "C" or better in ENG 025 and ENG 032. Introduces the student to the ethical domain as a field of philosophy by examining major concepts such as happiness, virtues and rules and applies them to practical moral problems.

PHL 213 Logic   3 Credits
Prerequisites: ENG 111. Introduces the student to logic as a field of philosophy by examining the structure of argument and applying critical thinking skills.

PHL 220 Philosophy of Religion   TransferIN 3 Credits
Prerequisites: ENG 111. Analyzes issues basic to understanding religion, including the problem of evil, free will and divine foreknowledge, arguments for the existence of God, relationship of faith and reason, and arguments for personal immortality.

PHO 100 Photography for Non-Majors   3 Credits
Prerequisites: None. Covers basic black and white photographic theory and technique. Includes basic black and white darkroom processes and physics of light and filters. Studies camera and lenses, characteristics of films and papers and the chemistry of emulsions, exposure, and development.

PHO 104 Basic Photography   3 Credits
Prerequisites: None. Covers basic black and white photographic theory and technique. Includes basic black and white darkroom processes and physics of light and filters. Study of camera and lenses, characteristics of films and papers and the chemistry of emulsions, exposure, and development.

PHO 106 Studio Practices   3 Credits
Prerequisites: PHO 104. Introduction to studio work in black and white photography using continuous light sources. Basic setup techniques and lighting methods for a variety of subject matter. Practice with photoflood lamps and quartz lamps, both floods and spots, and a variety of equipment used to modify light.

PHO 107 Intermediate Photography   3 Credits
Prerequisites: PHO 104. Further develops advanced camera skills and black and white photographic vision. Special attention is placed on the practice and theory of the zone system. The course introduces special darkroom techniques and processes and refines black and white printing and processing skills. It will also emphasize good composition and the use of photography as a communications tool.

PHO 109 Studio Lighting Techniques   3 Credits
Prerequisites: PHO 106 and VIS 115. Further explores multiple lighting set-ups, studio electronic flash, location lighting, and special effects. Emphasis will be put on conceptualizing the photograph from start to finish.

PHO 201 Principles of Color Photography   3 Credits
Prerequisites: PHO 104 and VIS 102. Develops camera and laboratory skills needed for color negative and color positive processes through work with state-of-the-art equipment and techniques. Encompasses color psychology and aesthetics as well as the physics of light in color photography. Color photographic theory will be emphasized.

PHO 203 Professional Portraiture   3 Credits
Prerequisites: PHO 109, PHO 201 and VIS 101. Explores approaches and methods in traditional and alternative portraiture in studio and on-location photography. Emphasizes creative approaches to commercial portraiture as well as lighting and posing for corrective portraiture.

PHO 204 Commercial Photography Techniques 3 Credits
Prerequisites: PHO 109. Introduces more advanced studio and lab techniques used in advertising and industrial photography. Emphasizes creative problem solving applications toward advanced commercial photographic assignments.

PHO 208 Independent Study I   3 Credits
Prerequisites: PHO 104 and PHO106. Provides advanced students with opportunities to research and design projects for specified areas of interest. Requires the project plan to be approved by the instructor. Restricts work to student program area and requires it to be portfolio quality.

**PHO 214 Journalistic and Editorial
Photography   3 Credits**
Prerequisites: PHO 104. Gives students the opportunity to photograph events and human interest features to gain experience in contributions to various publications. Emphasizes establishing visual relationships in the photo essay.

**PHO 216 Advanced Processes and
Production Techniques   3 Credits**
Prerequisites: PHO 107, PHO 201, VIS 101 and VIS 201. Introduces specialized lab/alternative process techniques in traditional and digital formats. Works with contemporary experimental darkroom and digital techniques. Covers issues in prepress production as they relate to the photographer.

PHO 218 Fine Art Photography   3 Credits
Prerequisites: None. Examines current issues in non-commercial photography. Explores attitudes of photographers and critics on a wide range of topics through directed reading, class discussion, and gallery visits.

PHO 222 Digital Photography   3 Credits
Prerequisites: VIS 201. Introduces students to digital imaging techniques in photography. Digital imaging software will be used as a tool to manipulate photographs and scanned imagery. Provides experience with digital studio setting. Provides experience with the digital darkroom environment including editing processes, manipulation of images and working with various output devices.

PHY 100 Technical Physics   4 Credits
Prerequisites: MAT 111. Corequisites: MAT 121 or MAT 131 or MAT 134 or MAT 137. Introduces the concepts and applications of physics.

Leads students to develop an integrated understanding of the theory and applications of measuring (or unit) systems, scalars, vectors, force, work, rates, energy, momentum, power, force transformers (simple machines), vibrations and waves, and time constants. Emphasizes understanding concepts, factual knowledge, computation, and application.

PHY 101 Physics I   4 Credits
Prerequisites: MAT 121 or MAT 131, or MAT 134 or MAT 137. Introduces the basic concepts of mechanics, including force and torque, linear and rotational motion, work, energy and power, fluids, and the physics of heat. Includes lab.

PHY 102 Physics II   4 Credits
Prerequisites: PHY 101. Introduces the physics of light, periodic and wave motion, electricity and magnetism, and concepts of modern and current physics. Includes lab.

PHY 220 Mechanics   3 Credits
Prerequisites: MAT 211. Corequisites: MAT 212. A calculus based physics course that provides a detailed analysis of uniform and accelerated motion; Newton's laws; gravitation and planetary motion; energy; momentum; conservation principles; circular motion; angular momentum; dynamics of rotation; statics; hydrostatics and hydrodynamics; simple harmonic motion and wave motion. Includes lab.

PHY 221 Heat, Electricity and Optics   3 Credits
Prerequisites: PHY 220 and MAT 212. A calculus based physics course that provides a detailed analysis of heat and energy; kinetic theory; elementary thermodynamics; heat transfer; electrostatics; electric current; AC and DC circuit analysis; electromagnetism; magnetic properties of matter; geometrical and physical optics. Includes lab.

PMT 101 Introduction to Plastics   3 Credits
Prerequisites: None. Introduction to the main plastic processing industries, techniques, and commonly used polymers.

PMT 106 Plastic Materials and Testing   3 Credits
Prerequisites: PMT 101. Introduces structure, properties, and processing characteristics of plastic polymers and additives.

PMT 107 Injection Molding   3 Credits
Prerequisites: PMT 101. Expands the student's knowledge of injection molding process, components, and industry.

PMT 108 Extrusion Process   3 Credits
Prerequisites: PMT 101. Introduces the extrusion processes, equipment and industrial applications.

PMT 201 Advanced Injection Molding   3 Credits
Prerequisites: PMT 107. Covers the procedures and techniques necessary to fully utilize the capabilities of modern injection molding equipment to properly process thermoplastic materials.

PMT 202 Advanced Extrusion   3 Credits
Prerequisites: PMT 108. Expands the student's knowledge of extrusion processes, equipment and industrial application.

PMT 208 Computer Applications in Plastics   3 Credits
Prerequisites: PMT 107 and PMT 108. Introduces the computer products and services available to aid in the design and manufacturing of plastic products.

PMT 209 Manufacturing of Plastics Products   3 Credits
Prerequisites: PMT 107 and PMT 108. Covers the economic, organizational, and quality control strategies employed by production technicians to maximize efficiency in plastics manufacturing operations.

**POL 101 Introduction to American
Government and Politics   TransferIN 3 Credits**
Prerequisites: Demonstrated competency through appropriate assessment or earning a grade of "C" or better in ENG 025 and ENG 032. Studies federalism, theories of the origins and purposes of government and other aspects of the American government including interest groups, political parties, and the electoral process. Emphasis is placed on constitutional backgrounds and the organization and functions of the executive, legislative, and judicial segments of the national government, civil liberties and civil rights, public opinion, media, bureaucracies, and domestic and foreign policy.

POL 112 State and Local Government   3 Credits
Prerequisites: Demonstrated competency through appropriate assessment or earning a grade of "C" or better in ENG 025 and ENG 032. Covers the basic organization and operation of state and local governments. Topics include federalism, state constitutions, courts, governors, legislatures, elections, campaign finance, interest groups, local governments, budgets and taxes, education and law enforcement.

**POL 201 Introduction to Political Science
TransferIN 3 Credits**
Prerequisites: Demonstrated competency through appropriate assessment or earning a grade of "C" or better in ENG 025 and ENG 032. Introduces students to the basic principles of political science, government and its institutions, international relations, political philosophy, and political theory. Emphasis on the impact of economy, culture, history, and environment on political behavior/events.

POL 210 Personal Law   3 Credits
Prerequisites: Demonstrated competency through appropriate assessment or earning a grade of "C" or better in ENG 025 and ENG 032. Examines the basis and principles of our legal system, how legal decisions are made and how they affect citizens' lives. Topics to be covered include federal and stare jurisdictions, criminal and civil law and procedures, freedom of speech, press and religion, privacy rights, work-

place rights, property rights, the role of juries in our legal system and the death penalty.

POL 211 Introduction to World Politics
TransferIN 3 Credits
Prerequisites: Demonstrated competency through appropriate assessment or earning a grade of "C" or better in ENG 025, ENG 032 and MAT 044. Investigates the interaction of modern international political institutions, leaders, and events. Further discussion includes comparative analysis from a global perspective and the impact of international relations on individual lives.

POL 220 Public Administration 3 Credits
Prerequisites: Demonstrated competency through appropriate assessment or earning a grade of "C" or better in ENG 025 and ENG 032. Focuses on bureaucracy in the federal government and its relation to local and state agencies.

PPT 101 Power Plant Fundamentals 3 Credits
Prerequisites: None. This course is an introduction to power plant systems. It emphasizes the use of schematics and diagrams in discussing power plant systems and identifying major components including boilers, turbines, generators, condensers, pumps, and auxiliary equipment. Also includes the study of pre-heaters, feed water, superheat, and reheat systems. Plant safety training and workplace procedures will also be emphasized

PPT 121 Power Plant Steam Systems 3 credits
Prerequisites: MAT 044 and PPT 101. This course studies the use of steam as a means of transferring energy and doing work. It will include principles of boiler operation to produce steam and the use of thermodynamics to understand the behavior and properties of a steam system. Major components will be studied along with how they play a role in the steam generation process. The class will include steam safety with principles of maintenance for use in troubleshooting and maintaining performance.

PPT 201 Power Plant Instrumentation
and Control 3 credits
Prerequisites: MIT 113 and PPT 101. This course introduces the basic principles of process instrumentation and control systems. It includes measurement parameters such as flow, pressure, level, temperature, and pH. Studies the use of programmable logic controllers, process controllers, and distributed control systems that are interfaced with sensors and actuators to maintain process stability.

PPT 210 Gas Turbines 3 credits
Prerequisites: PPT 101. This course introduces the student to combined-cycle gas and steam turbine power plants. It includes information on system layout, controls, operation, and maintenance.

PPT 221 Advanced Power Plant Systems 3 credits
Prerequisites: PPT 101 and PPT 201. Examines online boiler control concepts, including combustion, feed water, header pressure, oxygen content, power demand, and other processes as applied to industrial power generation and process heat supply. Studies power plant cycles, thermodynamic properties of water, and steam. Also examines pollution control systems, gas turbine, and diesel generators.

PST 116 Hazardous Materials Control 3 Credits
Prerequisites: Demonstrated competency through appropriate assessment or earning a grade of "C" or better in ENG 032 and MAT 040. Introduces hazardous material, managing the hazardous material incident, explosive and gas emergencies, shipping containers, cylinder safety devices, responding to flammable and combustible liquids, oxidizer, poison, and corrosive and radioactive emergencies. Emphasizes chemical identification, marking, storage, shipping and handling of hazardous substances. Uses basic monitoring instruments for hazardous areas to protect workers and first responders. Covers protective clothing and equipment. Emphasizes safety procedures and practices.

PST 117 Hazardous Materials Technician 4 credits
Prerequisites: CHM 101 or Advisor Approval. Introduces hazardous material, managing the hazardous material incident, explosive and gas emergencies, shipping containers, cylinder safety devices, responding to flammable and combustible liquids, oxidizer, poison, and corrosive and radioactive emergencies. This course emphasizes chemical identification, marking, storage, shipping and handling of hazardous substances; and uses basic monitoring instruments for hazardous areas to protect workers and first responders. Covers protective clothing and equipment. Emphasizes safety procedures and practices. Detailed labs are included. On completion of this course the student is eligible to take the national test certification for Hazardous Materials Technician.

PST 120 First Responder 3 Credits
Prerequisites: None. Provides students with information necessary to recognize emergency situations, know the proper course of action with different types of emergencies and apply appropriate first aid. Addresses handling of victims of hazardous materials accidents. Covers CPR, including one and two rescuer; and adult, infant and child resuscitation.

PST 121 Risk Management 3 Credits
Prerequisites: Demonstrated competency through appropriate assessment or earning a grade of "C" or better in ENG 032 and MAT 040. This course will provide the student with an introduction to industrial safety, OSHA, various OSHA standards, workplace inspections, citations and penalties. Employee and employer responsibilities, right-to-know laws and safety awareness programs are examined. Safety motivation and knowledge, creating a healthy work environment and health haz-

ards and issues are also studied. Areas such as the role of the supervisor, employee assistance programs, management of stress helps students understand the role employer's play in creating a healthy workforce. In addition, the contributions of safety committees and other governmental agencies responsible for safety are examined.

PST 220 Incident Management System 3 Credits
Prerequisites: Program advisor approval. Emphasizes command and control of major department operations at an advanced level, linking operations and safety. Areas of study include: Incident Management System, Pre-Incident, Size-up, command Systems, Sectoring Functions, Staging, Safety Officer, Command Post, Communications, News Media, Computer Aided Resources.

PST 221 Computer Design and Planning 3 Credits
Prerequisites: TEC 104. Focuses on the needs and uses of the computer in the public safety. Includes computed-aided dispatch, advanced levels of cameo, I-Chiefs, computer-aided design of equipment, generation of incident reports, application of computers for the budgetary process, computer-aided resource and materials, maintenance, test records of vehicles and the GIS program.

PSY 101 Introduction to Psychology TransferIN 3 Credits
Prerequisites: Demonstrated competency through appropriate assessment or earning a grade of "C" or better in ENG 025, ENG 032, and MAT 044. Surveys behavior and cognitive processes as they affect the individual. The course focuses on biological foundations, learning processes, research methodologies, personality, human development and abnormal and social psychology.

PSY 102 Advanced Introduction to Psychology 3 credits
Prerequisites: PSY 101. Continuation of PSY 101. Addresses advanced topics regarding the methods, data, and theoretical interpretations in the areas of learning, sensory psychology, and psychophysiology. Presents specific theoretical issues, research methods, and findings in the areas of developmental, social, personality, and abnormal psychology.

PSY 180 Ethics in Helping Professions 3 Credits
Prerequisites: Demonstrated competency through appropriate assessment or earning a grade of "C" or better in ENG 025 and ENG 032. Introductory level course provides an overview of legal and ethical aspects in the field of workers in social service settings. Includes topics such as personal schema and how it influences working with others, confidentiality, and laws regarding reporting of neglect and abuse.

PSY 201 Lifespan Development TransferIN 3 Credits
Prerequisites: PSY 101 and ENG 111. Examines human growth and development through the prenatal, child, adolescent, and adult stages of life. Physical, emotional, psychosocial, and cognitive influences from conception to death will be addressed.

PSY 205 Abnormal Psychology 3 Credits
Prerequisites: PSY 101 and ENG 111. Examines theories and research related to abnormal behavior with primary emphasis on symptoms, etiology, and treatment of psychological disorders.

PSY 210 Drugs and Human Behavior 3 Credits
Prerequisites: PSY 101 and ENG 111. Examines theories and research related to human drug use and abuse. Drug pharmacology; physiological effects of drugs on the nervous system; social and psychological issues affecting drug abuse; the treatment, effects, prevention of substance abuse; and therapeutic uses of drugs in mental illness will be addressed.

PSY 211 Research Methods in Psychology 3 credits
Prerequisites: PSY 101 and MAT 050. The course will familiarize students with the basic concepts, techniques, and problems associated with conducting research in psychology. Students will be provided with the analytical and critical thinking skills required to design, conduct, and interpret empirical research. Problems specific to research in psychology will be explored.

PSY 240 Human Sexuality TransferIN 3 Credits
Prerequisites: PSY 101. Considers sexuality from an historic, scientific, evolutionary and psychosocial perspective including sex research and methods, the biological bases of sexuality, sexual behavior, sexuality and the life cycle, sexual problems, and social issues.

PSY 242 Educational Psychology 3 Credits
Prerequisites: ENG 111 and PSY 101. Designed for students interested in the educational process at all levels. Included will be topics related to student motivation, assessment and achievement. Successful students will understand the importance of the application of knowledge, as well as the acquisition of knowledge. The course provides a basic understanding of the psychology of teaching and education. Problem solving in the educational setting will be stressed.

PSY 253 Introduction to Social Psychology 3 Credits
Prerequisites: PSY 101 and SOC 111. The study of social psychology as a science, and how social psychologists study the interactions within and between individuals, social groups and institutions. This course crosslists with SOC 253.

PSY 260 Health Psychology 3 Credits
Prerequisites: PSY 101. An introduction to health and emphasizing mind-body issues, the biopsychosocial model and cognitive behavioral theory. The course will emphasize research methods and current practice related to stress and pain, as well as health related behaviors. Within the course, treatment approaches, behavioral risk factors and public health issues will be addressed.

PTA 101 Introduction to Physical Therapist Assisting 3 Credits
Prerequisites: Demonstrated competency through appropriate assessment or earning a grade of "C" or better in ENG 025, ENG 032 and MAT 044. Explores the history and concepts of physical therapy, physical therapist assisting and rehabilitative medicine. Introduces fundamentals of patient care including universal precautions; body substance isolation; OSHA guidelines, patientassessment including vital signs; body mechanics; and patient handling with applications of physics principles. Includes preparation of patients, treatment areas and equipment.

PTA 102 Diseases, Trauma and Terminology 3 Credits
Prerequisites: PTA 101 and ANP 101. Explores diseases and trauma which necessitate physical therapy for the client. Medical terminology, anatomy, physiology, psychology, disabilities and physics related to these conditions are discussed along with instrumentation, implants and fixation devices. Provides students with the opportunity to explore their own reactions to illness and disability and to discuss how to recognize patients' and families' reactions to illness and disability.

PTA 103 Administrative Aspects of Physical Therapist Assisting 3 Credits
Prerequisites: PTA 101 and ANP 101. Addresses the legal and ethical aspects of physical therapist assisting and patient care along with charting, documentation, report writing, patient history procurement, record keeping, charges, insurance information including diagnostic and procedure coding, third party reimbursement, Medicare, Medicaid, electronic claims and patient
rights including American Disabilities Act policy and architectural barriers identification. Discusses current issues in health care provision. Explores patient, family, and professional communication techniques, body language and electronic communication as well as techniques in patient teaching. Includes performing within the limitations of scope of skills, basic principles of levels of authority and responsibility, planning, time management, supervisory process, performance evaluations, policies and procedures.

PTA 106 PTA Treatment Modalities I 5 Credits
Prerequisites: PTA 101 and ANP 101. Continues concentration on the fundamentals of patient care including universal precautions, assessment of vital signs, body mechanics and patient positioning. Includes lectures, demonstrations and simulated patient problems in the laboratory portion of the course. Studies new techniques in depth, such as gait training, gait device selection, goniometry range of motion exercises and measuring. Introduces various modalities including hydrotherapy, thermo-therapy, massage, traction and intermittent compression techniques. Safety factors are emphasized in both the lectures and the laboratories. The laboratory provides the setting for the practice and implementation of theories and techniques of PTA

106. Students practice assessments and treatment methods on themselves and one another under the guidance and supervision of the laboratory instructor.

PTA 107 Kinesiology 5 Credits
Prerequisites: PTA 101 and ANP 101. Introduces the physical therapist assistant student to the science of kinesiology. By definition, kinesiology is the study of movement. Studies human movement and brings together the fields of anatomy, physiology, physics and geometry. Prerequisite knowledge of skeletal and muscular anatomy and physiology is necessary. Class will consist of equal parts of lectures, demonstration and student participation in locating, observing and palpating various bony prominences and musculatures. Much of kinesiology requires independent study to memorize origin, insertion, action and innervation of all muscles. The knowledge gained in this course is an integral part of the students' background preparation for the practice of physical therapy.

PTA 115 Clinical I 2.5 Credits
Prerequisites: PTA 102, PTA 103 and PTA 106. Requires the student to perform in a clinical environment with patients, using applications of theory and techniques of PTA 106, under the guidance of a registered physical therapist.

PTA 205 Clinical II 5 Credits
Prerequisites: PTA 115 and PTA 217. Requires the student to perform in a clinical environment with patients using applications of theories and techniques of PTA 207 under the guidance of a registered physical therapist.

PTA 207 Treatment Modalities II 5 Credits
Prerequisites: PTA 106 and PTA 107. Reviews joint structure, muscle origins, insertions, innervations, actions and physiology. Covers normal and abnormal gait, orthotics and prostheses, arthritis and joint replacement and postural correcting exercise along with treatment principles and therapeutic exercises for the neck, back, and peripheral joints. Discusses general exercise principles and progression of the orthopedic patient through an exercise program. Addresses appropriate applications of principles of physics and kinesiology.

PTA 215 Clinical III 5 Credits
Prerequisites: PTA 205. Requires the student to perform in a clinical environment with patients using applications of theory and techniques of PTA 217 under the guidance of a registered physical therapist.

PTA 217 Treatment Modalities III 5 Credits
Prerequisites: PTA 106. Provides an in-depth approach to therapeutic exercise as performed by the physical therapy assistant. Covers basic anatomy and physiology of the central and peripheral nervous systems and activities of daily living. Includes exercise physiology and neuro-

physiology and advanced principles and procedures of therapeutic exercise appropriate for cardiopulmonary, cardiovascular, orthopedic and neurologic conditions, stroke, spinal cord and peripheral nerve injuries. Discusses prevention measures, specialized techniques and the utilization of specialized therapeutic equipment and correlates them to exercise applications. Addresses appropriate applications of kinesiology and principles of physics. Provides practice and implementation of theories and techniques of PTA 106 and PTA 207 in the lab setting.

PTA 224 Current Issues and Review   1 Credit
Prerequisites: PTA 215. Teaches the sources of physical therapy research and discusses the recognition of the roles and responsibilities of physical therapy assistants. Requires completion and presentation of an independent project. Includes a comprehensive review of the course to prepare the student for licensure exam.

QSC 101 Quality Control Concepts and Techniques I   3 Credits
Prerequisites: Demonstrated competency through appropriate assessment or earning a grade of "C" or better in MAT 050. Covers current quality control concepts and techniques in industry with emphasis on modern manufacturing requirements. Studies the fundamental tools of statistical process control which are used in industry to reduce costs and increase productivity at a predictable quality level. Emphasizes principles and techniques of SPC to ensure prevention instead of detection of problems is practiced. Includes basic statistical and probability theory, sampling techniques, process control charts, the nature of variation, histograms, attributes and variable charts.

QSC 102 Statistical Process Control   3 Credits
Prerequisites: None. Studies the fundamental tools of statistical process control which are used in industry to reduce costs and increase productivity at a predictable quality level. Emphasizes principles and techniques of statistical process control to ensure that prevention instead of detection of problems is practiced. Includes basic statistical and probability theory, sampling techniques, process control charts, the nature of variation, histograms, and attribute and variable charts.

QSC 105 Non-Destructive Testing Application   3 Credits
Prerequisites: None. Presents an overview of the relationship of non-destructive testing to the total quality function. Includes advantages and limitations of various test methods including liquid penetrate, magnetic particle, ultrasound, and eddy current.

QSC 201 Advanced Statistical Process Control   3 Credits
Prerequisites: QSC 101. Builds on the basic principles of QSC 101 with advanced techniques by industry to ensure economic production of goods based on defect prevention rather than defect detection. Covers the various decisions to modify, change or adjust the process based on statistical evidence. Stresses interpretation of statistical data and distinguishing between common and special causes of problems.

Emphasizes appropriate use of control charts, trend analysis, assessing process and machine capability, evaluating the measurement process, using computers, and implementation techniques.

QSC 202 Quality Control Concepts and Techniques II   3 Credits
Prerequisites: QSC 101. Acquaints students with quality control systems. Emphasizes the systems approach to quality, establishing the quality system and applying total quality control in the company.

QSC 203 Metrology   3 Credits
Prerequisites: Demonstrated competency through appropriate assessment or earning a grade of "C" or better in MAT 050. Instructs a student in mechanical precision measurement techniques and applications. Provides instruction and laboratory experiences in surface plate inspections, optical comparators, hardness testing, and coordinate measuring machines (CMM). Discusses calibration and measurement system analysis.

QSC 204 Total Quality Management   3 Credits
Prerequisites: QSC 101. Teaches the philosophy of total quality management. Focuses on improving processes and reducing variation in systems. Covers management's role in improving aspects of manufacturing and service organization to achieve quality improvement.

QSC 206 ISO/QS International Standards   3 Credits
Prerequisites: None. Teaches the basic principles of ISO 9000 standards, QS 9000 standard, ISO 14000 standard. Includes instruction on internal auditing with emphasis on the role of the internal auditor in regard to the maintenance of the quality systems.

QSC 210 Quality Management Principles   3 Credits
Prerequisites: None. Stresses the management concept relating to employee attitudes, motivation and job satisfaction, as well as philosophies, styles of leadership, and team building as they relate to quality objectives.

RAD 111 Orientation and Patient Care   4 Credits
Prerequisites: Acceptance into the program through appropriate assessment. Introduces the profession of radiology and the practitioner's role in the health care system. It also provides students with the basic concepts of patient care dealing with the emotional and physical needs of the patients including infection control and standard precautions.

RAD 112 Image Production and Evaluation I   3 Credits
Prerequisites: Acceptance into the program through appropriate assessment. Content is designed to establish a knowledge base in factors that govern and influence the production and recording of radiologic images. Film and electronic imaging with related accessories will be emphasized. The mathematical calculations of x-ray technique will be taught along with the operations of darkrooms and developing equipment commonly used in the field.

RAD 113 Radiographic Positioning I   3 Credits
Prerequisites: Acceptance into the program through appropriate assessment. An introduction to and familiarize the student with the basic routines of radiographic positioning, shielding techniques, and related terminology. Actual radiographs are included for analysis of proper positioning and overall image quality.

RAD 114 Radiographic Clinical Education I   3 Credits
Prerequisites: Acceptance into the program through appropriate assessment. Content and clinical practice experiences shall be designed for sequential development, application, critical analysis, integration, synthesis and evaluation of concepts and theories in the performance of radiologic procedures. Through structured sequential, competency-based assignments in clinical setting, concepts of team practice, patient-centered clinical practice and professional development shall be discussed, examined and evaluated. Clinical practice experiences shall be designed to provide patient care and assessment, competent performance of Radiologic imaging and total quality management. Levels of competency and outcomes measurement shall ensure the well being of the patient preparatory to, during and following the radiologic procedure.

RAD 115 Radiographic Positioning II and Lab   3 Credits
Prerequisites: RAD 113. Content is designed to provide a knowledge base necessary to perform standard radiographic procedures along with the application to special studies. Consideration will be given to the production of images of optimal diagnostic quality. Laboratory experience should be used to complement the didactic portion.

RAD 116 Radiographic Clinical Education II   4 Credits
Prerequisites: RAD 114. Content and clinical practice experiences shall be designed for sequential development, application, critical analysis, integration, synthesis and evaluation of concepts and theories in the performance of radiologic procedures. Through structured sequential, competency-based assignments in clinical setting, concepts of team practice, patient-centered clinical practice and professional development shall be discussed, examined and evaluated. Clinical practice experiences shall be designed to provide patient care and assessment, competent performance of Radiologic imaging and total quality management. Levels of competency and outcomes measurement shall ensure the well being of the patient preparatory to, during and following the radiologic procedure.

RAD 117 Radiation Physics and Equipment Operation   3 Credits
Prerequisites: Admission to the program through appropriate assessment. Designed to establish a basic knowledge of atomic structure and terminology. Also presented are the nature and characteristics of radiation, x-ray production and the fundamentals of photon interactions with matter.

RAD 201 Radiographic Positioning III and Lab 3 credits
Prerequisites: RAD 115. Content is designed to provide a knowledge base necessary to perform standard radiographic procedures along with the application to special studies. Consideration will be given to the production of images of optimal diagnostic quality. Laboratory experience should be used to complement the didactic portion.

RAD 202 Radiographic Clinical Education III 4 Credits
Prerequisites: RAD 116. Content and clinical practice experiences shall be designed for sequential development, application, critical analysis, integration, synthesis and evaluation of concepts and theories in the performance of radiologic procedures. Through structured sequential, competency-based assignments in clinical setting, concepts of team practice, patient-centered clinical practice and professional development shall be discussed, examined and evaluated. Clinical practice experiences shall be designed to provide patient care and assessment, competent performance of Radiologic imaging and total quality management. Levels of competency and outcomes measurement shall ensure the well being of the patient preparatory to, during and following the radiologic procedure.

RAD 203 Radiographic Clinical Education IV 4 Credits
Prerequisites: RAD 202. Content and clinical practice experiences shall be designed for sequential development, application, critical analysis, integration, synthesis and evaluation of concepts and theories in the performance of radiologic procedures. Through structured sequential, competency-based assignments in clinical setting, concepts of team practice, patient-centered clinical practice and professional development shall be discussed, examined and evaluated. Clinical practice experiences shall be designed to provide patient care and assessment, competent performance of Radiologic imaging and total quality management. Levels of competency and outcomes measurement shall ensure the well being of the patient preparatory to, during and following the radiologic procedure.

RAD 204 Radiographic Clinical Education V 4 Credits
Prerequisites: RAD 203. Content and clinical practice experiences shall be designed for sequential development, application, critical analysis, integration, synthesis and evaluation of concepts and theories in the performance of radiologic procedures. Through structured sequential, competency-based assignments in clinical setting, concepts of team practice, patient-centered clinical practice and professional development shall be discussed, examined and evaluated. Clinical practice experiences shall be designed to provide patient care and assessment, competent performance of Radiologic imaging and total quality management. Levels of competency and outcomes measurement shall ensure the well being of the patient preparatory to, during and following the radiologic procedure.

RAD 206 Radiobiology and Radiation Protection 3 Credits
Prerequisites: RAD 111 and RAD 117. Covers theories and principles of the effects of ionizing radiation upon living tissues. Includes dosages, measurements, DNA structures and functions, and cellular radiosensitivity. Overview of the principles of radiation protection are also covered.

RAD 209 Radiographic Positioning IV 3 Credits
Prerequisites: RAD 201. Content is designed to provide a knowledge base necessary to perform standard radiographic procedures along with the application to special studies. Consideration will be given to the production of images of optimal diagnostic quality. Laboratory experience should be used to complement the didactic portion.

RAD 218 Image Production and Evaluation II 3 Credits
Prerequisites: RAD 112. Explains phototiming and its relationship to manual techniques. Associates kVp and mAs with the quality and quantity of radiation. Covers standard darkroom procedure, automatic processing, fluoroscopy and quality assurance.

RAD 221 Pharmacology and Advanced Procedures 3 Credits
Prerequisites: RAD 201. Covers theories and principles of current imaging modalities. Content is also designed to cover contrast media along with the theory and basic technique of venipuncture. The role of the radiographer during medical emergencies is also addressed in this course.

RAD 299 General Exam Review 3 Credits
Prerequisites: Program Advisor Approval. Reviews content of program, emphasizing anatomy, physics, exposure principles, positioning and radiation safety. Simulated registry exams prepare the student for the American Registry of Radiologic Technologist Examination.

RES 121 Introduction to Respiratory Care 6 Credits
Prerequisites: Program Chair Approval. Presents an introduction into respiratory care, including a brief history of the profession; equipment cleaning and sterilization techniques; patient assessment techniques; and isolation techniques. Also includes medical records documentation, gas analyzers, introduction and application of therapeutic modalities including oxygen therapy, aerosol and humidity therapy, hyperinflation therapy, basic airways and an overview of ethical practice and safety. Introduces concepts and techniques of tracheobronchial aspiration.

RES 122 Therapeutic Modalities 3 Credits
Prerequisites: RES 121. Presents medicinal aerosol therapy and respiratory pharmacology and applying it to the nervous system and its receptors. In addition, and bronchial hygiene therapies will be discussed. Introduces basic bedside pulmonary function testing.

RES 123 Cardiopulmonary Physiology 3 Credits
Prerequisites: ANP 101. Presents the cardiopulmonary system including ventilation, perfusion, and gas exchange; introduces interpretation and application of arterial blood gases, acid-base regulation, and physiologic monitoring. Reviews the basic principles of physics as it relates to the respiratory system.

RES 124 Practicum I 2 Credits
Prerequisites: Current CPR AHA Course C or equivalent and RES 121. Completed health forms. Introduces the student to the hospital environment. The student will be exposed to various hospitals and respiratory care departments, patient charts, patient identification and communication within the hospital. Provides supervised experience in oxygen therapy, hyperinflation therapy, humidity/aerosol therapy and charting.

RES 125 Critical Care I 3 Credits
Prerequisites: RES 121. Presents an introduction to the respiratory care of the critically ill patient. This includes arterial blood gas collection; analysis and interpretation; and basic medical laboratory data. Introduces concepts and techniques of critical respiratory care of adults, to include establishment and maintenance of artificial airways. Includes application of adult mechanical ventilators and related cardio-pulmonary monitoring equipment.

RES 126 Clinical Medicine I 3 Credits
Prerequisites: RES 123. This particular course introduces etiology, symptomatology, diagnosis, therapeutics, and prognosis of selected pulmonary diseases.

RES 127 Practicum II 5 Credits
Prerequisites: RES 124. Provides supervised experience in selected therapeutic modalities. An introduction to chest physiotherapy, medicinal aerosol therapy, intermittent positive pressure breathing, and ultrasonic therapy will be included. Students will participate in the development of respiratory care plans to improve patient care. Students may have observation rotations in critical care areas. Continuing certification in CPR is required.

RES 128 Practicum III 5 Credits
Prerequisites: RES 125 and RES 127. Provides additional supervised experience in selected therapeutic modalities. Also includes advanced patient assessment, arterial blood gas analysis, and airway care. Provides supervised experience in adult critical care with mechanical ventilation. Allows students to participate in intra-hospital transfers along with land/air transports. Students will participate in the development of respiratory care plans to improve patient outcomes within the critical care setting. An introduction to pulmonary function testing is included. Continued Certification in CPR is required.

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RES 129 Respiratory Care Pharmacology   **3 Credits**
Prerequisites: Program Chair Approval. The most common pharmacological agents currently being administered are discussed according to all body systems and in relation to the nervous system and its receptors. Emphasis is placed on classifications, indications, side effects, dosages, and routes of administration. Medication discussion to include, but not limited to emergency drugs, antibacterial medication, anti-fungal medications and the implications and complications of IV therapy.

RES 221 Cardiopulmonary Diagnostics   **4 Credits**
Prerequisites: RES 126. Presents in-depth approaches to diagnostic procedures used in the treatment of critically ill neonatal, pediatric, and adult patients. Special emphasis is placed on techniques of patient evaluation, selection of equipment, performing procedures, cardiopulmonary monitoring during the procedure, interpreting test results and suggesting management of the patient. Also included are advanced techniques of patient assessment through pulmonary function testing and other selected assessment techniques.

RES 222 Critical Care II   **3 Credits**
Prerequisites: RES 125. Presents advanced techniques of mechanical ventilation of neonatal, pediatric and adult patients; includes fetal development and assessment; neonatal and pediatric assessment, equipment, procedures and therapeutic techniques, introduces related aspects of the neonatal intensive care unit environment. Selected neonatal and pediatric diseases will be discussed.

RES 224 Clinical Medicine II   **3 Credits**
Prerequisites: RES 221. Studies etiology, symptomatology, diagnosis, therapeutics, and prognosis of disease conditions related to respiratory care; focuses on the interrelation of all physiologic systems. Emphasis on treatment protocols; includes preparation for the clinical simulation component of national credentialing examination.

RES 226 Continuing Care   **2 Credits**
Prerequisites: RES 222. Presents a brief history of home care patients in relation to respiratory care modalities. Provides an overview of respiratory care roles in the alternative care sites and pulmonary rehabilitation programs.

RES 227 Practicum IV   **3 Credits**
Prerequisites: RES 128. Provides additional supervised experience in selected therapeutic modalities. Also includes advanced cardiopulmonary diagnostic techniques, application of invasive and non-invasive monitoring of the cardiopulmonary system, and experience in respiratory care and quality assurance roles. Also includes advanced clinical experience in adult, pediatric and neonatal intensive care units. Exposure to home care settings, alternative care sites and pulmonary rehabilitation programs is expected. Students are expected to complete patient care plans, written case study and all clinical exams. Continuing certification in CPR is required.

RES 229 Emergency Management   **1 Credit**
Prerequisites: Current CPR AHA Course C or equivalent. Application of various techniques in advanced cardiopulmonary support during life threatening events. At the end of the course, students will be expected to successfully apply knowledge in a mock adult patient care setting.

RES 250 Beginning Polysomnography   **2 Credits**
Prerequisites: Program Chair Approval. An overview of the field of Polysomnography including history, job responsibilities, credentialing, medical ethics and patient confidentiality. Normal and abnormal sleep disorders, integrating the physiologic functions of the nervous, respiratory and cardiovascular systems. Emphasis on basic sleep sciences, physiology, monitoring, electrical safety, diagnosis and treatment of sleep disorders.

RES 251 Intermediate Polysomnography   **3 credits**
Prerequisites: ANP 102 and RES 250. Basic discussions of recording sleep apnea montage. Emphasis on equipment, principles of operation, associated activity related to normal and abnormal stages of sleep, placement and calibration of the following: electroencephalography (EEG), electroculography (EOG), electocardiography (ECG), electromyography (EMG), pulse oximetry (SpO2), inductive plethysmography and airflow thermocouple.

RES 252 Polysomnography Directed Practice I   **3 credits**
Prerequisites: ANP 102 and RES 250. Directed practice in the clinical setting in sleep laboratory or a sleep center. Departmental orientation, policies and procedures, individual body mechanics and patient transfer techniques. Emphasis in overseeing periodic cessation of respiratory activity based on the placement and monitoring of the following: electroencephalography (EEG), electroculography (EOG), electrocardiography (ECG), electromyography (EMG), pulse oximetry (SpO2), inductive plethysmography and airflow thermocouple.

RES 253 Neurophysiology of Sleep   **2 credits**
Prerequisites: RES 251 and RES 252. Presentation and discussion of the chemical and neural control of the onset of sleep and wakefulness; normal function and pathophysiology; current theory and research applications.

RES 254 Intermediate Polysomnography II   **3 credits**
Prerequisites: RES 251 and RES 252. Presentation and discussion of the psychomotor practices related to interpretation of the polysomnogram for adult and pediatric patients. Emphasis on continuous positive airway pressure (CPAP) and bi-level positive airway pressures (BiPAP) equipment; artifact recognition and troubleshooting of sleep montage results. Includes digital data acquisition and parasomnias.

RES 255 Polysomnography Directed Practice II   **3 credits**
Prerequisites: RES 252. Directed practice in the clinical setting in sleep laboratory or a sleep center. Departmental orientation, policies and procedures; assist adult and pediatric patient set-up and discontinuance in monitoring of the following: electroencephalography (EEG), electroculography (EOG), electrocardiography (ECG), electromyography (EMG), pulse oximetry (SpO2), inductive plethysmography and airflow thermocouple. Emphasis on scoring a sleep montage related to respiratory

RTT 100 Introduction to Radiation Therapy   **2 credits**
Prerequisites: Admission to the Radiation Therapy program. Content is designed to provide the student with an overview of the foundations in radiation therapy and the practitioner's role in the health care delivery system. This course will provide students with a historical overview of radiation therapy and its role in medicine. An introduction to radiation therapy treatment techniques, equipment, terminology, and professional responsibilities will be included.

RTT 145 Clinical Externship I   **1 credit**
Prerequisites: Admission to the Radiation Therapy program. Corequisite: RTT 100. Introduces the student to procedures performed in Radiation Therapy, and provides the student with greater opportunities to gain practical experience. During this first semester of clinical education, the student is expected to develop the competency to perform simple clinical procedures with progressively less assistance. Emphasis continues to be given to the development of professional responsibility and the practice of total patient care and radiation safety practices.

RTT 150 Patient Care in Radiation Oncology   **3 credits**
Prerequisites: None. Corequisite: RTT 100. Provides the student with basic concepts of patient care specific to radiation therapy including consideration of physical and psychological conditions. Handling of patients, patient examinations, asepsis, local and systemic reactions, nutrition and medications are discussed. Factors influencing patient health during and following a course of radiation will be identified.

RTT 155 Clinical Externship II   **3 credits**
Prerequisites: RTT 145. Introduces the student to procedures performed in Radiation Therapy, and provides the student with greater opportunities to gain practical experience. During this second semester of clinical education, the student is expected to develop the competency to perform simple to intermediate clinical procedures with progressively less assistance. Emphasis continues to be given to the development of professional responsibility and the practice of total patient care and radiation safety practices.

RTT 200 Introduction to Patient Care   **2 Credits**
Prerequisites: None. Emphasis is on the holistic approach of the radiation oncology patient to include patient management and education.

There will be an overview of diagnostic imaging and a thorough review of practical anatomies.

RTT 220 Techniques and Applications in
Radiation Therapy   3 credits
Prerequisites: RTT 100. Content is designed to provide the student with the basic concepts of dosimetry and treatment planning. Various external beam techniques and applications, depth dose data, and summation of isodose curves are discussed. Modalities of treatment, patient setup, dose measurement, dose calculation and verification are also included.

RTT 223 Radiobiology and Safety   2 credits
Prerequisites: RTT 100. Introduces the student to the fundamentals of radiobiology and the effects of radiation on living tissue. This course evaluates the effects of radiation from the cellular level, to the epidemiological effects on communities and potential offspring. Specific topics in radiobiology include; basic radiation interactions, cellular biology review, short and long-term effects of radiation, case studies, risk factors, containment and handling of live sources, reduction of patient dose, radiation monitoring and applicable state and federal regulations.

RTT 225 Clinical Externship III   4 credits
Prerequisites: RTT 155. Introduces the student to procedures performed in Radiation Therapy, and provides the student with greater opportunities to gain practical experience. During this third semester of clinical education, the student is expected to develop the competency to perform simple to intermediate clinical procedures with progressively less assistance. Emphasis continues to be given to the development of professional responsibility and the practice of total patient care and radiation safety practices.

RTT 230 Pathology and Treatment Principles I   2 credits
Prerequisites: RTT 220. Provides the student with the fundamentals of each disease process. Malignant conditions, etiology and epidemiology, patient workup and methods of treatment are discussed. Attention is given to patient prognosis, treatment results and the effects of combined therapies.

RTT 232 Radiation Therapy Physics   3 credits
Prerequisites: RTT 220. Establishes a basic knowledge of physics pertinent to developing an understanding of radiations used in the clinical setting. Fundamental physical units, measurements, principles, atomic structure and types of radiation are emphasized. Also presented are the fundamentals of x-ray generating equipment, x-ray production and its interaction with matter.

RTT 233 Research Methodology in
Radiation Oncology   1 credit
Prerequisites: RTT 100. Introduces the student to the logic, method,

variation and precision of thought required in the practice and/or consumption of research.

RTT 235 Clinical Externship IV   5 credits
Prerequisites: RTT 225. Introduces the student to procedures performed in Radiation Therapy, and provides the student with greater opportunities to gain practical experience. During this fourth semester of clinical education, the student is expected to develop the competency to perform simple to intermediate clinical procedures with progressively less assistance. Emphasis continues to be given to the development of professional responsibility and the practice of total patient care and radiation safety practices.

RTT 240 Pathology and Treatment Principles II   2 credits
Prerequisites: RTT 230. Provides the student with the fundamentals of several more disease processes. Malignant conditions, etiology and epidemiology, patient workup and methods of treatment are discussed. Attention is given to patient prognosis, treatment results and the effects of combined therapies.

RTT 241 Treatment Planning   3 credits
Prerequisites: RTT 220. Provides the student with the concepts of dosimetry and treatment planning. Various external beam techniques and applications, depth dose data, and summation of isodose curves are discussed. Modalities of treatment, patient setup, dose measurement, dose calculation and verification are also included.

RTT 242 Quality Management in
Radiation Oncology   2 credits
Prerequisites: RTT 232. Focuses on the evolution of quality management (QM) programs and continuing quality improvements in radiation oncology. Topics will include the need for quality assurance (QA) checks; QA of the clinical aspects and chart checks; film checks; the various types of evaluations and tests performed on simulators, megavoltage therapy equipment and therapy planning units; the role of radiation therapists in quality management programs; legal and regulatory implications for maintaining appropriate QM guidelines as well as the role computers and information systems serve within the radiation oncology department.

RTT 243 Radiation Therapy Capstone Course   2 credits
Prerequisites: RTT 223, RTT 232, and RTT 240. Integrates the various professional courses into a single perspective as it relates to radiation oncology. Professional concerns will be addressed and attention will be given to issues related to the workplace, continued professional development, and the need for lifelong learning. Extensive review of programmatic material will be the focus of this course. Extensive review of physics, protection and radiation therapy procedures is covered.

RTT 245 Clinical Externship V   3 credits
Prerequisites: RTT 235. Allows the student to become proficient in

all radiation therapy clinical procedures. During this fifth semester of clinical education, the students are further introduced to dosimetry procedures and are expected to have attained competency to perform all clinical procedures independently, under the direct supervision of a qualified professional or radiation therapist. Emphasis continues to be given to the development of professional responsibility and the practice of total patient care and radiation safety practices.

RTT 247 Introduction to Radioactivity   3 Credits
Prerequisites: None. This course addresses mechanisms of nuclear decay and interaction of radiation with matter.

RTT 249 Radiation, Biology and Safety   2 Credits
Prerequisites: None. An introductory course which focuses on nononcologic disease processes and the biological behavior of neoplastic conditions and quality assurance.

RTT 260 Radiation Therapy Orientation   3 Credits
Prerequisites: None. A generalized overview of radiation therapy. Another focus of this course is gaining a foundation in medical terminology as it pertains to radiation therapy in medicine.

RTT 261 Clinical I   1 Credit
Prerequisites: None. Emphasis of this clinical education is on accurately delivering the planned course of radiation therapy with supervision of the clinical supervisor.

RTT 262 Oncology Physics   3 Credits
Prerequisites: None. This course focuses on specific radiation therapy treatment units and photon and electron beam dosimetry and its application to the treatment of patients.

RTT 263 Oncology Pathology I   3 Credits
Prerequisites: None. Emphasis of this course focuses on clinical oncology as well as malignant conditions and methods of treatment.

RTT 264 Clinical II   2 Credits
Prerequisites: None. Emphasis of this clinical education is on accurately delivering the planned course of radiation therapy with supervision of the clinical supervisor.

RTT 265 Oncology Radiation I   2 Credits
Prerequisites: None. Emphasis is on principles of clinical application in treatment planning, brachytherapy and quality assurance.

RTT 266 Oncology Pathology II   3 Credits
Prerequisites: None. Emphasis of this course focuses on clinical oncology as well as malignant conditions and methods of treatment.

RTT 267 Oncology Radiation II   2 Credits
Prerequisites: None. Emphasis is on principles of clinical application in treatment planning, brachytherapy and quality assurance.

RTT 268 Planning and Dosimetry 4 Credits
Prerequisites: None. This course focuses on specific radiation treatment units and photon and electron beam dosimetry and its application to the treatment of patients.

RTT 269 Clinical III 2 Credits
Prerequisites: None. Emphasis of this clinical education is on accurately delivering the planned course of radiation therapy with supervision of the clinical supervisor.

RTT 270 Clinical IV 2 Credits
Prerequisites: None. Emphasis of this clinical education is on accurately delivering the planned course of radiation therapy with supervision of the clinical supervisor.

RVT 101 Introduction to RV Services/Customer Relations 2 Credits
Prerequisites: None. Covers the basic hand tools and equipment used in the repair of recreational vehicles. Discusses service and safety practices, technician liability, applicable laws, service documentation and manuals. Examines RV classifications, industrial codes and standards. Covers techniques, insights and pertinent knowledge needed to foster positive relationships with customers as well as situations and remedies for dealing with dissatisfied customers.

RVT 102 Electrical Concepts 3 Credits
Prerequisites: None. Acquaints students with fundamentals of AC/DC electricity and circuitry related to troubleshooting and repair of recreational vehicles. Studies the use of test equipment and identification of component symbols and applies them to actual RV systems and appliances.

RVT 103 Fluid Power, Heat and Mechanical Systems 4 Credits
Prerequisites: None. Provides an overview of pneumatic and hydraulic power generation, controls, and actuation devices found in recreational vehicles. Includes an introduction of the basic principles of gears, levers, pulleys and their application to simple machines. Studies the effects and application of heat on solids, liquids and gases.

RVT 104 LP Gas 2 Credits
Prerequisites: None. Addresses LP gas fundamentals, properties and safety as used in troubleshooting and repair of RV systems within industry and governmental codes and standards. Encompasses the use of test equipment and identification of component symbols and applies them to actual RV systems and appliances.

RVT 105 RV Electrical Systems Service 5 Credits
Prerequisites: RVT 102. Provides necessary skills and knowledge to troubleshoot, repair and/or replace AC/DC circuitry, components and auxiliary systems in recreational vehicles.

RVT 106 RV Braking, Suspension and Towing Systems 3 Credits
Prerequisites: None. Covers the operation, troubleshooting, repair and/or replacement of electric brakes, suspension and towing systems in all types of recreational vehicles. Studies actual RV systems and appliances. Includes appropriate mathematical formulae.

RVT 107 RV Air Conditioning and Absorption Refrigeration Service 4 Credits
Prerequisites: None. Acquaints students with absorption refrigeration principles, troubleshooting, and repair utilizing actual RV systems and appliances. Studies inspection, maintenance and replacement techniques.

RVT 108 Heating Systems/Accessory Installation and Service 3 Credits
Prerequisites: None. Covers theory of operation, diagnosis and troubleshooting of heating systems and accessories.

RVT 109 Water Systems and Water Heating 2 Credits
Prerequisites: None. Covers theory of operation, diagnosis and troubleshooting of water systems and water heaters.

RVT 110 Interior Coach 3 Credits
Prerequisites: None. Deals with installation, troubleshooting, repair and/or replacement of interior cabinetry, furniture, hardware, paneling, ceilings, flooring, floor coverings, upholstery, soft goods, doors and other interior components. Demonstrates and applies basic skills to working with wood, plastics and fabrics.

RVT 111 Exterior Coach 4 Credits
Prerequisites: None. Details structural characteristics of various types of recreational vehicles. Provides skills and knowledge necessary to repair, recover and reseal exterior sidewalls and roofs. Demonstrates and applies techniques for locating and repairing water and air leaks, windows, basic body repair, touch-up and painting.

RVT 112 Pre-Delivery and Preventive Maintenance 2 Credits
Prerequisites: None. Provides techniques and procedures to ensure proper pre-delivery preparation of new units. Covers inspection, periodic checks and adjustments and fluid, filter and belt replacements. Utilizes actual vehicles and components.

RVT 201 Metal Processing and Metallurgy 2 Credits
Prerequisites: None. Covers applications of welding and the study of metals utilized in the RV service industry. Discusses and applies the use of sheet metal tools, layout, cutting, forming and fastening.

RVT 220 Recreational Vehicle Retailing 3 Credits
Prerequisites: None. Provides techniques and procedures that will promote retailing experience for sales staff in the recreational vehicle

dealership. The sales techniques will focus on the total vehicle and its systems, with promotion of each system to complete the sale.

RVT 280 Co-op/Internship 1-6 Credits
Prerequisites: None. Provides the opportunity to work at a job site specifically related to a student's career objectives. Provides on-the-job experience while earning credit toward an associate degree.

SCI 100 Earth Science 4 Credits
Prerequisites: Demonstrated competency through appropriate assessment or earning a grade of "C" or better in ENG 025, ENG 032 and MAT 050. Introduces physical concepts and theories pertaining to current applications and trends in earth science. Basic concepts in geology, meteorology, oceanography, and astronomy will be illustrated.

SCI 111 Physical Science TransferIN 3 Credits
Prerequisites: Demonstrated competency through appropriate assessment or earning a grade of "C" or better in ENG 025, ENG 032 and MAT 050. Introduces physical concepts and theories pertaining to current applications and trends in physics. Basic concepts in chemistry, earth science and astronomy will also be illustrated. Emphasizes concepts and applications.

SOC 111 Introduction to Sociology TransferIN 3 Credits
Prerequisites: Demonstrated competency through appropriate assessment or earning a grade of "C" or better in ENG 025, ENG 032 and MAT 044. Introduces students to the major theoretical paradigms of the science of human society, including fundamental concepts, descriptions, and analyses of society, culture, socialization processes, social institutions, social change, social stratification and the application of this understanding to everyday living.

SOC 164 Multicultural Studies 3 Credits
Prerequisites: Demonstrated competency through appropriate assessment or earning a grade of "C" or better in ENG 025 and ENG 032. Introduces students to the historical experiences, values, cultures, and beliefs of the major racial and ethnic groups that make up the population of the United States. Examines central questions in the theoretical and empirical study of race and ethnicity. This course will help prepare students to understand, appreciate, and work effectively with people who are different from themselves.

SOC 245 Cultural Diversity in the United States 3 Credits
Prerequisites: SOC 111 and ENG 111. Surveys multiple dimensions of diversity and social stratification in the United States, including race, ethnicity, age, class, physical ability, religion, gender, and sexuality. The social impact of the cultural integration of these groups will be introduced.

SOC 252 Social Problems TransferIN 3 Credits
Prerequisites: SOC 111. Explores various problems in contemporary American society. Examines structural and cultural aspects of social problems with specific reference to their origin, development, and

suggested solutions. Course utilizes a sociological framework which encompasses a variety of theoretical perspectives.

SOC 253 Introduction to Social Psychology 3 Credits
Prerequisites: PSY 101 and SOC 111. The study of social psychology as a science, and how social psychologists study the interactions within and between individuals, social groups and institutions. This course crosslists with PSY 253.

SOC 261 Sociology of Relationships and the Family 3 Credits
Prerequisites: Demonstrated competency through appropriate assessment or earning a grade of "C" or better in ENG 025 and ENG 032. Examines the sociological and psychological dynamics of dating, relationships, marriage, family life and parenting. Introduces students to the major theoretical paradigms as they relate to relationships. Emphasis will be placed on how our contemporary society and culture is affecting these institutions and customs. The course will also explore the impact of divorce and stepfamilies on today's lifestyles.

SPM 101 Introduction to Sport Management 3 Credits
Prerequisites: Demonstrated competency through appropriate assessment or earning a grade of "C" in ENG 025, ENG 032 and MAT 044. Focuses on the nature and scope of sport management. Students will examine the breadth of sport related careers as well as engage in critical thinking about current sport management issues and trends.

SPM 201 Sport in Society 3 Credits
Prerequisites: Demonstrated competency through appropriate assessment or earning a grade of "C" or better in ENG 025, ENG 032 and MAT 044. Introduces the socio-cultural dimensions of sport. Sport is sometimes trivialized as a playground off to the side of the real world. This course will describe to the student that sport is a microcosm of society as well as a site for changing society. Finally, the course will show that sport has a profound influence on the social life of large numbers of people of all ages.

SPM 202 Management and Leadership in Sport 3 Credits
Prerequisites: SPM 101. A survey course designed to introduce the student to the management related to sport. The course will assist students in understanding what the role of a manager is in the various sport industries.

SPM 203 Venue and Event Management 3 Credits
Prerequisites: SPM 202. A survey course designed to introduce the student to the management related to venues and events in sport. The course will assist students in understanding the role of a venue or event manager.

SPM 280 Sport Management Internship 3 Credits
Prerequisites: Program Chair Approval. A full-time work experience in the sport industry (40 hours/week). The experience is actual work in a sport management setting in which management practices are applied.

SPN 101 Spanish Level I TransferIN 4 Credits
Prerequisites: Demonstrated competency through appropriate assessment or earning a grade of "C" or better in ENG 025 and ENG 032. An introductory course in Spanish. Focuses on developing students' capacity to use the language and to appreciate Hispanic cultures. Emphasis is placed on skills of listening, speaking, reading and writing, and on grammar acquisition. Use of audio-visual aids, video, vocabulary building, computer resources as appropriate and "less-stress" techniques.

SPN 102 Spanish Level II TransferIN 4 Credits
Prerequisites: SPN 101 or demonstrated competency in Spanish through appropriate assessment; demonstrated competency in reading and writing through appropriate assessment or earning a grade of "C" or better in ENG 025 and ENG 032. Continues the study of Spanish for students who have had the equivalent of one semester of college-level Spanish. Introduces advanced grammar structure and additional vocabulary to further develop speaking, reading, writing and listening skills and appreciation of Hispanic cultures. Provides opportunities to practice Spanish and experience Spanish culture.

SPN 201 Spanish Level III TransferIN 4 Credits
Prerequisites: SPN 102 or demonstrated competency in Spanish through appropriate assessment; demonstrated competency in reading and writing through appropriate assessment or earning a grade of "C" or better in ENG 025 and ENG 032. In Spanish 201, Spanish is the primary medium of instruction, as well as the subject. The goal of the course is to continue development of and reinforcement of the basic skills of the target language: listening, speaking, reading, and writing. The course continues the study of grammar/syntax and vocabulary building and introduces Spanish and Latin American civilization through conversation coordinated with reading of cultural text as well as written and oral reports.

SPN 202 Spanish Level IV TransferIN 4 Credits
Prerequisites: SPN 201 or demonstrated competency in Spanish through appropriate assessment; demonstrated competency in reading and writing through appropriate assessment or earning a grade of "C" or better in ENG 025 and ENG 032. Spanish is the primary medium of instruction, as well as the subject. Continues development of and reinforcement of the basic skills of the target language: listening, speaking, reading, and writing. Continues the study of grammar/syntax and vocabulary building. Study of Spanish and Latin American civilizations through readings, both journalistic and literary, and reinforced through class discussion as well as written and oral reports.

SUR 111 Fundamentals of Surgical Technology 4 Credits
Prerequisites: Admission to clinical phase of Surgical Program, ANP 101, MAT 111 or higher, ENG 111 and HHS 101. Introduces principles of sterile techniques and the operative care of the surgical patient. Includes the roles of scrubbing and circulating duties.

SUR 112 Application of Surgical Fundamentals 2 Credits
Prerequisites: Admission to clinical phase of Surgical Program, ANP 101, MAT 111 or higher, ENG 111 and HHS 101. Corequisites: SUR 111. Demonstrates the application of surgical fundamentals. Correlates theory to practice by requiring students to participate as members of a surgical team in laboratory simulations.

SUR 113 Surgical Procedures I 3 Credits
Prerequisites: SUR 111, SUR 112, ANP 102, BIO 2XX General Microbiology, Pharmacology, HHS 105 and Program Advisor Approval. Corequisites: SUR 114. Introduces general surgical procedures with review of perioperative patient care including diagnostic testing, pre-operative care, and immediate post-operative care.

SUR 114 Clinical Applications I 3 Credits
Prerequisites: SUR 111, SUR 112, ANP 102, BIO 2XX General Microbiology, Pharmacology, HHS 105 and Program Advisor Approval. Corequisites: SUR 113. Correlates the principles and theories of basic surgical procedures to clinical performance in affiliating hospitals. Includes knowledge, skills and attitudes necessary for successful implementation of safe patient care in an operating room.

SUR 201 Pharmacology 3 Credits
Prerequisites: ANP 101 and HHS 101 and demonstrated competency through appropriate assessment or earning a grade of "C" or better in MAT 050. Introduces the basic concepts of pharmacology. Emphasis is given to classification, indications, interactions and adverse reactions of commonly used medications. Dosage calculation, weights and measures, terminology and abbreviations associated with drug use are presented. Medication use in the perioperative patient is addressed.

SUR 211 Surgical Procedures II 6 Credits
Prerequisites: SUR 113 and SUR 114 and COM 101 or COM 102 and PSY 101 or SOC 111. Corequisites: SUR 212. Studies advanced surgical procedures in relation to the physiological aspects of surgical intervention including those procedures related to the special senses, genitourinary, reproductive, musculoskeletal and nervous systems. Includes knowledge of the involved anatomy, existing pathology, surgical hazards encountered, the surgical procedure, and a review of perioperative patient care.

SUR 212 Clinical Applications II 9 Credits
Prerequisites: SUR 113 and SUR 114 and COM 101 or COM 102 and PSY 101 or SOC 111. Corequisites: SUR 211. Correlates the basic principles and theories of advanced surgical procedures to clinical performance in affiliating hospitals. Includes knowledge, skills and attitudes necessary for successful implementation of safe patient care in an operating room.

SUR 213 Surgical Procedures III   **3 Credits**
Prerequisites: SUR 211 and SUR 212. Corequisites: SUR 214. Studies specialized surgical procedures including those related to asthetic and reconstructive surgery, the cardiothoracic and vascular systems. Includes knowledge of the involved anatomy, existing pathology, surgical hazards encountered, the surgical procedure, and a review of perioperative patient care.

SUR 214 Clinical Applications III   **7 Credits**
Prerequisites: SUR 211 and SUR 212. Corequisites: SUR 213. Correlates principles and theories of specialized surgical procedures to the clinical performance in affiliating hospitals. Includes the knowledge, skills and attitudes necessary for successful implementation of safe patient care in an operating room.

TEC 101 Processes and Materials   **3 Credits**
Prerequisites: Demonstrated competency through appropriate assessment or earning a grade of "C" or better in ENG 024 and ENG 031. An introduction to the characteristics, fundamentals and properties of material used in industry. Also introduced are the fundamentals of traditional and non-traditional processes, tools and machines used in industry.

TEC 103 Collaborative Team Skills   **1 Credit**
Prerequisites: Demonstrated competency through appropriate assessment or earning a grade of "C" or better in ENG 024 and ENG 031. Introduces students to effective communication skills, conflict resolution, team collaboration and decision-making.

TEC 104 Computer Fundamentals for Technology   **3 Credits**
Prerequisites: Demonstrated competency through appropriate assessment or earning a grade of "C" or better in ENG 024, ENG 031 and MAT 044. Provides an introduction to microcomputer hardware, applications and software. Emphasis is placed on computer literacy, the Windows operating system, computer programming and industrial orientation. Commonly used microcomputer applications are surveyed.

TMA 101 Holistic Approach to Massage Therapy 3 Credits
Prerequisites: None. Considers the holistic approach to wellness with discussion including the connection of disease, the autonomic nervous system, and the emotions. Explores the importance of the mind-body connection.

TMA 102 Legal Massage Applications   **3 Credits**
Prerequisites: None. Presents ethics of medicine and medical practice, as well as legal requirements and implications for allied health professions. Specific emphasis will be placed on the applications of ethics for massage practice situations. Forms, records, and documentation considerations will be addressed. Forms appropriate for use in a massage practice will be generated.

TMA 103 Human Energie   **2 Credits**
Prerequisites: None. This course helps the student develop an understanding of the human energy system and how this system impacts and reflects the physical, emotional, mental, and spiritual aspects of health. The techniques of several energy therapists will be taught, as well as professional practitioner/client interactions and the importance of self-care. These techniques are useful to aid relaxation, reduce pain, lessen anxiety, and accelerate wound healing, both for oneself and others.

TMA 104 Hand and Foot Reflexes   **2 Credits**
Prerequisites: None. Teaches the different aspects and points on the foot and hand relating to other areas of the body. Can be integrated into massage practice or can be an independent approach. An introduction to the musculoskeletal, cardiovascular, and nervous systems and their relationship to the zones on the feet are included. Systems disorders, including the sensory and endocrine, are also identified and discussed. The relationships of the five zones of the foot are identified as are the areas of the spine with spinal nerve innovation and intervention.

TMA 120 Massage Technician Training I   **3 Credits**
Prerequisites: ANP 101. This course will explore in detail the history of massage, professional and legal issues of massage, sanitation, professional touch, and massage equipment and products. Coursework will include the anatomy, physiology and psychology of the body, by systems, and the effects of massage on each. Disease conditions will be discussed in terms of indications and contraindications for massage. Medical terminology will be introduced and used to prepare SOAP note documentation of massages performed. Students will perform circulatory massage techniques, body mechanics, and draping skills for full body relaxation massage.

TMA 122 Massage Financial Management   **3 Credits**
Prerequisites: None. Provides instruction in massage office financial administration, bookkeeping, materials management and computer applications. Addresses product sales and inventory and bookkeeping for tax preparation. Client tracking methods will be discussed. Retirement planning and self-employment/employment issues will be explored.

TMA 125 Acupressure Theory and Methods   **3 Credits**
Prerequisites: ANP 101. Introduces the student to information and treatments designed around the approach of Asian medicine including energy systems, meridians, and the five elements theory. The basics of Shiatsu are included.

TMA 126 Jin Shin Do Bodymind Acupressure   **2 Credits**
Prerequisites: None. This class presents theories and techniques necessary for effective practice of Jin Shin Do Acupressure. Approximately half the time will be in lecture and half in practical hands-on skill. Students will be introduced to the basic theories of Traditional

Chinese Medicine which is the basis of all Asian Bodywork Therapy. Students will learn 57 points in relation to surrounding anatomy. After this class, students will be able to utilize simple acupressure techniques alone or combined with massage sessions. With successful completion of this class, students are eligible to take the Intermediate Jin Shin Do class.

TMA 140 Massage Technician Training II   **3 Credits**
Prerequisites: ANP 101 and TMA 120. Client consultations, conditions, and treatment plans are discussed. Emotional transference and psychological effects of massage will be addressed. Additional techniques and modalities addressed include deep friction, trigger point release, unwinding, PNF techniques, positional release, and intro to therapeutic exercise. Corporate (chair) massage is introduced. Guidelines for setting up a practice, including compliance with local state regulations, are discussed. Together these courses provide training for entry-level technicians into massage therapy.

TMA 141 Massage Through the Lifespan   **3 Credits**
Prerequisites: ANP 101 and TMA 120. This advanced course teaches the therapist to work with pregnant mothers to help ease the discomforts and stress that accompany pregnancy. Techniques to help with delivery are also addressed. It also addresses massage of infants and children to enhance bonding, relaxation, and comfort of the infant and child. Massage aspects of geriatric and disabled clients are addressed.

TMA 142 Aromatherapy   **3 Credits**
Prerequisites: ANP 101 and TMA 120. This advanced course teaches the therapist the integration of essential oils and aromatherapy into massage techniques.

TMA 201 Sports Massage, Injuries and Hydrotherapies   **3 Credits**
Prerequisites: TMA 120 and TMA 140. Presents a specific application of massage therapy designed to train the therapist in the treatment of athletes. Includes: pre-event and post-event techniques, general maintenance massage, and therapeutic exercises. First aid for sports injuries and the use of hydrotherapies will be explored.

TMA 202 Deep Tissue/Muscle Release   **3 Credits**
Prerequisites: TMA 120 and TMA 140. Helps practitioners apply deeper techniques in the body therapy releasing chronically held tissue from past trauma, illness, or recent injury. Discusses the use of various treatment modalities. Deep tissue techniques include compression and compression with stroke.

TMA 203 Herbs, Drugs and Massage   **3 Credits**
Prerequisites: ANP 102, HHS 101 and TMA 120. Covers common medical conditions, the most common medications and the herbal remedies used to supplement healthcare. The most common medications and herbal remedies will be discussed according to body systems with emphasis on classifications, uses, routes of administration, calcula-

tions, dosages, interactions, incompatibilities, and side effects. The student will learn how to research medical conditions, medications, and herbal remedies. Also addressed are special precautions, legal aspects, and patient education.

TMA 204 Herbal Remedies   3 Credits
Prerequisites: ANP 102 and HHS 101. Covers the common medical conditions, and the herbal remedies that are used to supplement healthcare. The most common herbal remedies will be discussed, as well as the traditional indications, dose ranges, side effects, and contraindications. The student will gain a more in depth knowledge of herbal remedies being utilized in healthcare today, and know how to research more knowledge on medical conditions and herbal remedies.

TMA 205 Pathology and Massage   3 Credits
Prerequisites: ANP 101, ANP 102 and TMA 120. Presents the basic concepts of diseases, their courses and functional disturbances as they relate to body systems. Includes the precipitating risk factors and appropriate methods of patient education regarding various disease processes and specifications for massage treatment.

TMA 206 Palpation Skills   2 Credits
Prerequisites: ANP 102 and TMA 140. Develops the student's palpation skills in order to enhance the practitioner's ability to evaluate the human body and energy systems. The course teaches a deeper understanding of muscular anatomy which includes craniosacral and fascial material. A substantial portion of this course will consist of exercises to refine palpation skills.

TMA 210 Biomechanics   3 Credits
Prerequisites: ANP 102 and TMA 140. Provides a basic understanding of joint movement and body motion. Addresses muscle action, origin and insertion, muscle synergists, antagonists, and evaluations of forces on each body region. Entry-level biomechanical principles with the structure, function and kinesiology of each body region will be explored.

TMA 220 Advanced Techniques and Hygiene   3 Credits
Prerequisites: TMA 120, TMA 125, TMA 140, TMA 141, and TMA 201 or TMA 202. Advanced training focusing on more techniques, body mechanics, and client management. It also addresses hygiene factors for both the therapist and the client. This course includes thorough client assessment techniques and is designed to expand the therapist into the medical field. The relationship of various illnesses and conditions to massage is discussed.

TMA 221 Business Development   3 Credits
Prerequisites: TMA 102, TMA 122 and TMA 140. Provides a basic understanding of the administrative responsibilities pertinent to massage therapy. Addresses computer usage, marketing, and office skills that will allow students to create, promote, and maintain their own

business. Students prepare a business plan and define their goals for massage therapy.

TMA 240 Advanced Sports Massage   3 Credits
Prerequisites: TMA 201. Prepares the sports massage therapist to be a higher qualified, specific therapist with an understanding of professional ethics and a team concept of (physician, trainer, coach, physical therapist, and massage therapist) as one team unit.

VID 106 Video Producing and Planning   3 Credits
Prerequisites: VIS 105. An introduction to producing and planning techniques. Focuses on knowledge and skills necessary to plan for video and audio productions. Develops visual flow and continuity, and applies principles of visual design to video storyboards.

VID 110 Production Editing I   3 Credits
Prerequisites: VIS 105. An introduction to non-linear, computer-based editing techniques and post-production skills. Focuses on knowledge and skills necessary to edit video and audio productions. Develops visual flow and continuity, and applies principles of visual design to video editing.

VID 111 Studio and Field Production I   3 Credits
Prerequisites: VIS 105. Hands-on training in basic technical skills. Students will be provided with an overview of the video production process, and help the student learn the terms and concepts used in the industry. This understanding will serve as the foundation for subsequent courses in video technology.

VID 113 Introduction to Film Appreciation   3 Credits
Prerequisites: Demonstrated competency through appropriate assessment or earning a grade of "C" or better in ENG 025 and ENG 032. An introduction to understanding and appreciating movie and film. Students will analyze movies for narrative and story telling properties, cinematography, acting, editing and sound design.

VID 202 Studio and Field Production II   3 Credits
Prerequisites: VID 110 and VID 111. Focuses on knowledge and skills necessary to create and execute good video and audio productions. This course is designed to provide the student with a more complete view of the process of videography techniques and the video production process. Student will use the terminology and concepts used in the industry.

VID 203 Studio and Field Production III   3 Credits
Prerequisites: COM 101 or COM 102, ENG 111 and VID 202. Advanced studio and field production skills. Focuses on writing, producing and shooting projects both in the studio and on-location. Projects include remote video "shoot" planning, location scouting and site preparation, and hands-on studio practicing. Focuses on knowledge and skills necessary to create and execute good video and audio productions.

VID 204 Studio and Field Production IV   3 Credits
Prerequisites: VID 203. Masters studio and field production skills with a focus on production, programming and project management both in the studio and on-location.

VID 211 Production Editing II   3 Credits
Prerequisites: VID 110 and VIS 105. An advanced look at non-linear, computer-based editing techniques and post-production skills. Focuses on knowledge and skills necessary to edit video and audio productions for a variety of media outlets. Continues development of visual flow and continuity while applying advanced principles of visual design to video editing.

VIS 101 Fundamentals of Design   3 Credits
Prerequisites: None. Introduces students to fundamental design theory. Investigations into design theory and color dynamics will provide experiences in applying design theory, ideas and creative problem solving. Provides design experiences in applying design theories and concepts, and creative problem solving.

VIS 102 Fundamentals of Imaging   3 Credits
Prerequisites: None. Introduces students to a full range of image input technology and manipulation including conventional photography, digital imaging, and computer scanners. Students will learn to communicate concepts and ideas through various imaging devices. Explores composition and fosters creativity.

VIS 103 Interactive Media I   3 Credits
Prerequisites: VIS 101, VIS 102 and VIS 115. Explores various software programs involved in creating multi-media presentations, digital movies, digital animation, introductory scripting through a series of short projects. Explore the role of interactive in contemporary marketing and design.

VIS 105 Video and Sound   3 Credits
Prerequisites: None. An introduction to the field of video technology. Students will learn the basics of planning, shooting, editing and post-producing video and sound. Projects include exercises in technical and creative skills application, equipment usage and production techniques.

VIS 110 Web Design I   3 Credits
Prerequisites: VIS 101 and VIS 115. An introductory level course, which focuses on the tools, strategies, and techniques for web site design, architecture, navigation, language and production. Explores the methods for creating successful web sites from concept to implementation. Examines the process of integrating text, graphics, audio, and video for effective communication of information.

VIS 111 Drawing for Visualization   3 Credits
Prerequisites: None. Introduces students to the tools and methods of drawing. Presents drawing as a catalyst to seeing and a way of record-

ing ideas. Gives students the necessary drawing preparation for the study of design.

VIS 112 Electronic Layout 3 Credits
Prerequisites: ART 115 and VIS 115. Provides intermediate instruction in practical and creative page layout. Uses an industry standard desktop publishing package designed for single and multi-page documents as a tool for executing layouts. Produces samples for student portfolios, which may include stationery, charts, forms, brochures, and calendars.

VIS 113 Typography 3 Credits
Prerequisites: None. An introductory course which addresses the issues pertinent to the proper and creative use of type and the enhancement of communication. Covers the history of type, typographic terminology, design, attention to aesthetics, common sense, and how we read. Projects emphasize an appreciation of and the practical use of type.

VIS 114 Graphic Design I 3 Credits
Prerequisites: VIS 101, VIS 115 and ART 115. Provides introductory instruction in design for communication primarily for print media. Teaches the steps in design development with meaningful message and concept. Produces samples for student portfolios, which may include elements or comprehensive projects in logo, stationery, newspaper, magazine, billboard, and interface design, etc.

VIS 115 Introduction to Computer Graphics 3 Credits
Prerequisites: None. A fundamental course which introduces students to the computer's use in visual communication. The beginning focus of the course is on basic computer terminology and use, mastering fundamental skills, and developing efficient working styles. These skills are then developed by creating work with imaging, drawing, interactive, and page layout software.

VIS 116 Electronic Illustration 3 Credits
Prerequisites: VIS 115. Provides intermediate instruction in illustration techniques using computer software designed for creating illustrations, technical, drawing, logos, packaging, maps, charts, and graphs. Emphasis is on preparing effective, creative illustrations for various media applications in an efficient, productive manner. Produces samples for student portfolios.

VIS 200 2-D Animation 3 Credits
Prerequisites: ART 116. Provides students with a solid introduction to digital 2D Animation. Primary emphasis will be placed on the various tools and techniques needed to create 2D movies. Strong emphasis will also be placed on effective information delivery as well as cutting edge design, both for the web and other media.

VIS 201 Electronic Imaging 3 Credits
Prerequisites: VIS 101 and VIS 102. Examines the area of raster image editing and current electronic darkroom software packages. Experience with the digital imaging environment includes calibrat-

ing scanning processes, digital camera input, manipulating images in black and white and color, working with retouching for advertising, illustrating text, and working with various output devices. Digital color spaces as they relate to various output devices will be covered. Calibration for 4-color separations and prepress procedures will be discussed as well as preparing images properly for the web.

VIS 202 Special Projects I 3 Credits
Prerequisites: ART 114. Provides advanced instruction in specific areas of student interest or in areas where there is a need to strengthen skills. Requires performance and completed work to be portfolio quality and reflect applicability to the main areas of the program. Suggested projects may include annual reports, catalogs, newsletters, menus, direct mail and/or other multi-piece or multi-page communications. Also may include actual community or non-profit projects.

VIS 203 Independent Study 3 Credits
Prerequisites: ART 114. Provides advanced students with opportunities to design projects for specified areas of interest. Requires the project plan to be approved by the instructor. Restricts work to student program area and requires it to be portfolio quality.

VIS 205 Business Practices for Visual Artists 3 Credits
Prerequisites: Program Advisor Approval and successful completion of 24 program credit hours. Examines legal and business issues affecting the professional visual artist.

VIS 206 Interdisciplinary Studies 3 Credits
Prerequisites: ART 217 or VIS 210 or PHO 109. Offers students the opportunity to complete selected projects while working in a team environment with students of other disciplines. Simulates situations found in industry.

VIS 207 Portfolio Preparation 3 Credits
Prerequisites: Program Advisor Approval. Provides advanced facilitation focusing on the students' final preparation for the workforce. Requires an evaluation and portfolio development plan to be approved by the instructor. Finalizes project work demonstrating acquired knowledge and skills, along with resume and cover letter, for presentation to prospective employers. Also provides students with the opportunity to use one credit for field of study.

VIS 209 3D Rendering and Animation I 3 Credits
Prerequisites: VIS 201. Examines the virtual world of 3D and how it can be applied as an illustration and animation element in multimedia. Students will explore navigation, modeling, rendering, animation, and camera and lighting techniques.

VIS 210 Web Design II 3 Credits
Prerequisites: VIS 102 and VIS 110. Further focuses on the tools, strategies, and techniques for web site design, architecture, navigation, language and production. Explores more in depth the methods for creat-

ing successful web sites from concept to implementation. Examines the process of integrating text, graphics, audio, and video for effective communication of information.

VIS 211 Interactive Media II 3 Credits
Prerequisites: VIS 103 and VIS 201. Further explores various software programs involved in creating; multi-media presentations, digital movies, digital animation and scripting.

VIS 212 3-D Rendering and Animation II 3 Credits
Prerequisites: VIS 209. Further examines the virtual world of 3D and how it can be applied as an illustration and animation element in multimedia. Students will expand on navigation, modeling, rendering, animation, and camera and lighting techniques.

VIS 213 Advanced Electronic Imaging 3 Credits
Prerequisites: VIS 201. The creation of the electronic image from digital imaging and scanning devices is further investigated. Advanced Adobe Photoshop illustration techniques are taught. Other software such as Adobe Dimensions and Fractal Painter are introduced. Students will work with both raster and vector software to create final output. An emphasis in final output is given to portfolio projects that are in the print, web, and film media.

VIS 217 Graphic Design II 3 Credits
Prerequisites: ART 114, ART 116 and VIS102. Provides intermediate instruction in design for communication primarily for print media. Further explores design theory by applying concepts to achieve meaningful marketing and advertising results. Produces samples for student portfolios, which may include elements or comprehensive projects appropriate to trade/industrial advertising, brochures, flyers, pamphlets, posters, direct mail and/or consumer magazine advertising/branding, etc.

VIS 218 Digital Production 3 Credits
Prerequisites: ART 114. Addresses the issues of electronic prepress (preparing electronic files for digital production). Topics covered include the tasks of prepress, paper knowledge, the entire printing production process (complete with requirements of the process) and electronic file management. A strong emphasis is placed on prepress terminology and jargon.

VIS 219 Graphic Design III 3 Credits
Prerequisites: ART 217 and VIS 201. Provides advanced instruction and experience with design projects/branding identity, which communicate a common theme or campaign through several different media – magazine, billboard, radio, television, direct mail, brochures, point of purchase, sales promotions and/or package design, etc. Produces samples for student portfolios.

WLD 100 Welding Processes 3 Credits
Prerequisites: None. Provides general study of oxy-fuel, shielded metal

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arc, gas tungsten arc, gas metal arc, submerged arc, plasma arc, resistance, flash and upset, friction, electron beam, and laser welding processes. Covers equipment, techniques, electrodes, fuel gases and/or shielding gases, weld joint design, advantages and limitations, process applications, process variables and operational costs.

WLD 101 Gas Welding I 3 Credits
Prerequisites: None. Introduces basic oxy-fuel brazing, soldering and braze welding. Involves detailed study of the techniques of making a strong braze or solder joint. Demonstrate proper technique for making a good braze weld joint on mild steel and cast iron. Provides additional background essential to performing maintenance and repair welds in industry.

WLD 103 ARC Welding I 3 Credits
Prerequisites: None. Covers the welding of ferrous metals and alloys utilizing metallic manual arc welding methods. Includes procedures in joint design using "T" joint, lap joint, and butt joint designs. Covers single pass and multi-pass techniques. Emphasizes safety hazards and safe practices in arc welding.

WLD 105 Welding Equipment and
Electrical Maintenance 3 Credits
Prerequisites: None. Focuses on the design of oxy-fuel welding and cutting equipment and electric arc welding and cutting equipment. Enables students to perform troubleshooting on the equipment and apply proper maintenance. Examines relationships of voltage, current, and resistance on electrical circuits with emphasis on the production of heat from the flow of electric current through resistance.

WLD 107 Welding Troubleshooting 3 Credits
Prerequisites: WLD 101 or WLD 109. Covers evaluation of weldments, welding procedures and tolerances, joint design and alignment. Also covers weld defects caused by improper equipment settings, equipment failure, base metal, improper filler metal, and improper shielding of welds. Emphasis will be placed on weldability of metals.

WLD 108 Shielded Metal Arc Welding I 3 Credits
Prerequisites: None. Provides students with knowledge of shielded metal arc welding operations and equipment. Provides extensive practice time to produce the skills to make satisfactory welds with this process. Emphasizes safety hazards and safety practices in arc welding.

WLD 109 Oxy-Fuel Gas Welding and Cutting 3 Credits
Prerequisites: None. Offers basic instruction in oxy-fuel welding with emphasis on welding techniques in fl at, horizontal, vertical, and overhead positions. Includes brazing, soldering and flame cutting. Focuses on safety hazards and safe practices in oxy-fuel welding and cutting.

WLD 115 Shop Practices I 1 Credit
Prerequisites: None. Provides use of a shop to obtain basic welding

skills using various types of welding processes.

WLD 116 Shop Practices II 1 Credit
Prerequisites: WLD 115. Continues open use of shop to practice various types of welding to improve operator skills to a higher level.

WLD 117 Shop Practices III 1 Credit
Prerequisites: WLD 116. Continues open use of shop to practice various types of welding to improve operator skills to an advanced level.

WLD 201 Special Welding Processes 3 Credits
Prerequisites: Advisor Approval. This is an advanced welding course that involves theory and hands-on practice with various welding processes such as FCAW, PAW, SAW, GTA and other welding processes. Presents welding processes with emphasis on use and orientation of the equipment.

WLD 202 ARC Welding II 3 Credits
Prerequisites: WLD 103, WLD 108, and WLD 109. Covers the welding of ferrous metals and alloys utilizing electric welding methods and techniques. Safety hazards and safe practices in arc welding are covered. Extensive practice in the vee groove butt welds in all positions, using a back-up strip, and low hydrogen electrodes in all positions are covered.

WLD 203 Pipe Welding I 3 Credits
Prerequisites: WLD 206. This course provides extensive practice in the preparation and welding of pipe in the 2G and 5G position, and information of preparation, methods of welding, and electrode and filler wires used.

WLD 204 Pipe Welding II 3 Credits
Prerequisites: WLD 108, WLD 206, WLD 207 and WLD 208. Provides extensive training in the preparation and welding of pipe in the 5G and 6G position. Includes information on preparation, method of welding, and electrodes and filler rods used.

WLD 205 Welding Codes, Specifications and
Estimating 3 Credits
Prerequisites: Advisor Approval. Provides students with different types of welding codes and testing operations. Covers procedures, specifications and information about filler materials, positions, post-heat and preheat treatment, backing strips, preparations of parent metals, cleaning and defects. Introduces students to various welding processes used in the welding industry. Prepares students with a background in which will assist them in taking the American Welding Society Certified Welding Inspector exam. The AWS, ASME and other codes are discussed.

WLD 206 Shielded Metal Arc Welding II 3 Credits
Prerequisites: WLD 108. Covers SMAW welding equipment and products used to produce groove type butt and fillet welds. Provides extensive practice to develop the skills to achieve satisfactory welds

of this type. Safety hazards and safe practices in arc welding are emphasized.

WLD 207 Gas Metal Arc (MIG) Welding 3 Credits
Prerequisites: None. Considers various gas metal welding (GMAW) processes including microwire, flux-core, inner shield, and submerged arc with emphasis on metal inert gas welding. Techniques of welding in all positions on various thicknesses metal.

WLD 208 Gas Tungsten Arc (TIG) Welding 3 Credits
Prerequisites: None. Provides students with through knowledge of the gas tungsten arc welding process. Includes detailed study of the techniques of making welds in all positions using the GTAW applications. Lectures and discussion provide additional background information essential to a qualified GTAW welder.

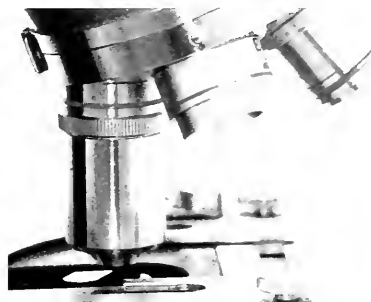### WLD 209 Welding Certification 3 Credits
Prerequisites: Advisor Approval. Prepares the student for certification in shielded metal arc, GTAW (Gas Tungsten Arc Welding), GMAW (Gas Metal Arc Welding) and other welding processes through study of the welding procedures and standards established by agencies such as the American Welding Society and the American Society of Mechanical Engineers.

WLD 210 Welding Fabrication I 3 Credits
Prerequisites: WLD 108, WLD 207 and MIT 102. Provides for continued practice in hands-on fabrication of welded products. Include basic equipment used in fabrication.

WLD 211 Welding Fabrication II 3 Credits
Prerequisites: WLD 108, WLD 207 and MIT 102. Provides opportunities for practice in hands-on fabrication of welded products. Include basic equipment used in fabrication.

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PROGRAM AVAILABILITY

IVY TECH
COMMUNITY COLLEGE

ANDERSON CAMPUS

Associate of Applied Science
Accounting
Accounting (via distance)
Business Administration
Business Administration (via distance)
Computer Information Systems
Computer Information Systems (via distance)
Computer Information Technology
Criminal Justice
Criminal Justice (via distance)
Design Technology
Design Technology (via distance)
Early Childhood Education (via distance)
Electronics and Computer Technology
Human Services
Human Services (via distance)
Manufacturing & Industrial Technology
Medical Assisting
Office Administration
Office Administration (via distance)
Paralegal Studies (via distance)

Technical Certificate
Accounting
Business Administration
Computer Information Systems
Computer Information Technology
Dental Assisting
Early Childhood Education (via distance)
Human Services
Manufacturing & Industrial Technology
Medical Assisting
Office Administration
Practical Nursing

Associate of Science
Business Administration
Computer Information Systems

Criminal Justice
Design Technology
Electronics and Computer Technology
General Studies
Human Services
Human Services (via distance)
Liberal Arts
Library Technical Assistant (via distance)
Nursing
Paralegal Studies (via distance)
Visual Communications

Associate of Arts
Liberal Arts

BLOOMINGTON CAMPUS

Associate of Applied Science
Accounting
Accounting (via distance)
Biotechnology
Business Administration
Business Administration (via distance)
Computer Information Systems
Computer Information Systems (via Distance)
Computer Information Technology
Criminal Justice
Design Technology
Design Technology (via distance)
Early Childhood Education
Early Childhood Education (via distance)
Electronics and Computer Technology
Human Services (via distance)
Manufacturing & Industrial Technology
Office Administration
Office Administration (via distance)
Paralegal Studies
Paralegal Studies (via distance)

Technical Certificate
Business Administration

Early Childhood Education
Early Childhood Education (via distance)
Human Services
Manufacturing & Industrial Technology
Office Administration
Practical Nursing

Associate of Science
Biotechnology
Business Administration
Criminal Justice
Criminal Justice (via distance)
Design Technology
Education
Electronics and Computer Technology
General Studies
Health Information Technology
Human Services (via distance)
Liberal Arts
Library Technical Assistant (via distance)
Nursing
Paralegal Studies
Paralegal Studies (via distance)
Paramedic Science
Radiation Therapy
Respiratory Care
Visual Communication

Associate of Arts
Liberal Arts

COLUMBUS CAMPUS

Associate of Applied Science
Accounting
Accounting (via distance)
Business Administration
Business Administration (via distance)
Computer Information Systems
Computer Information Systems (via distance)
Computer Information Technology

Criminal Justice
Design Technology
Design Technology (via distance)
Early Childhood Education
Early Childhood Education (via distance)
Human Services
Human Services (via distance)
Interior Design
Manufacturing & Industrial Technology
Medical Assisting
Office Administration
Office Administration (via distance)
Paralegal Studies (via distance)
Paramedic Science
Surgical Technology
Visual Communications

Technical Certificate
Accounting
Central Services Technician
Dental Assisting
Design Technology
Early Childhood Education
Early Childhood Education (via distance)
Human Services
Manufacturing & Industrial Technology
Medical Assisting
Office Administration
Practical Nursing

Associate of Science
Accounting
Agriculture
Business Administration
Computer Information Systems
Criminal Justice
Criminal Justice (via distance)
Design Technology
Early Childhood Education
Education
General Studies

Human Services (via distance)
Liberal Arts
Library Technical Assistant (via distance)
Nursing
Paralegal Studies (via distance)
Paramedic Science
Visual Communications

Associate of Arts
Liberal Arts

EAST CHICAGO CAMPUS

Associate of Applied Science
Accounting
Accounting (via distance)
Automotive Technology
Building Construction Management
Business Administration
Business Administration (via distance)
Computer Information Systems
Computer Information Systems (via distance)
Computer Information Technology
Construction Technology
Design Technology
Design Technology (via distance)
Early Childhood Education (via distance)
Hospitality Administration
Human Services (via distance)
Manufacturing & Industrial Technology
Mortuary Science
Office Administration
Office Administration (via distance)
Paralegal Studies (via distance)

Technical Certificate
Accounting
Automotive Technology
Business Administration
Computer Information Systems

Computer Information Technology
Construction Technology
Design Technology
Early Childhood Education (via distance)
Hospitality Administration
Manufacturing & Industrial Technology
Office Administration

Associate of Science
Building Construction Management
Business Administration
Computer Information Systems
Criminal Justice (via distance)
Design Technology
General Studies
Human Services (via distance)
Liberal Arts
Library Technical Assistant (via distance)
Paralegal Studies (via distance)
Visual Communications

Associate of Arts
Liberal Arts

ELKHART CAMPUS

Associate of Applied Science
Accounting
Accounting (via distance)
Business Administration
Business Administration (via distance)
Computer Information Systems
Computer Information Systems (via distance)
Computer Information Technology
Design Technology
Design Technology (via distance)
Early Childhood Education (via distance)
Electronics and Computer Technology
Human Services (via distance)
Medical Assisting
Office Administration (via distance)

Paralegal Studies (via distance)
Recreational Vehicle Service Technology

Technical Certificate
Business Administration
Computer Information Systems
Computer Information Technology
Early Childhood Education
Early Childhood Education (via distance)
Medical Assisting
Practical Nursing
Recreational Vehicle Service Technology

Associate of Science
Business Administration
Computer Information Systems
Computer Information Systems (via distance)
Criminal Justice (via distance)
Design Technology
Electronics and Computer Technology
General Studies
Human Services
Human Services (via distance)
Liberal Arts
Library Technical Assistant (via distance)
Paralegal Studies (via distance)
Visual Communications

Associate of Arts
Liberal Arts

EVANSVILLE CAMPUS

Associate of Applied Science
Accounting
Accounting (via distance)
Automotive Technology
Biotechnology
Building Construction Management
Business Administration
Business Administration (via distance)

Computer Information Systems
Computer Information Systems (via distance)
Computer Information Technology
Criminal Justice
Design Technology
Design Technology (via distance)
Early Childhood Education
Early Childhood Education (via distance)
Electronics and Computer Technology
Hospitality Administration
Human Services
Human Services (via distance)
Interior Design
Manufacturing & Industrial Technology
Medical Assisting
Office Administration
Office Administration (via distance)
Paralegal Studies (via distance)
Paramedic Science
Public Safety
Surgical Technology
Visual Communications

Technical Certificate
Accounting
Automotive Technology
Business Administration
Early Childhood Education
Early Childhood Education (via distance)
Hospitality Administration
Manufacturing & Industrial Technology
Medical Assisting
Office Administration
Practical Nursing
Public Safety

Associate of Science
Agriculture
Biotechnology
Building Construction Management
Business Administration

Computer Information Systems
Criminal Justice
Criminal Justice (via distance)
Design Technology
Early Childhood Education
Education
Electronics and Computer Technology
General Studies
Human Services
Human Services (via distance)
Liberal Arts
Library Technical Assistant (via distance)
Nursing
Paralegal Studies (via distance)
Pre-Engineering
Visual Communications

Associate of Arts
Liberal Arts

FORT WAYNE CAMPUS

Associate of Applied Science
Accounting
Accounting (via distance)
Automotive Technology
Aviation Technology
Business Administration
Business Administration (via distance)
Computer Information Systems
Computer Information Systems (via distance)
Computer Information Technology
Construction Technology
Criminal Justice
Design Technology
Design Technology (via distance)
Early Childhood Education
Early Childhood Education (via distance)
Hospitality Administration
Human Services

Human Services (via distance)
Manufacturing & Industrial Technology
Medical Assisting
Office Administration
Office Administration (via distance)
Paralegal Studies (via distance)
Public Safety
Therapeutic Massage

Technical Certificate
Accounting
Automotive Technology
Business Administration
Computer Information Systems
Computer Information Technology
Construction Technology
Design Technology
Early Childhood Education
Early Childhood Education (via distance)
Hospitality Administration
Human Services
Manufacturing & Industrial Technology
Medical Assisting
Office Administration
Practical Nursing
Public Safety
Therapeutic Massage

Associate of Science
Building Construction Management
Business Administration
Computer Information Systems
Criminal Justice
Criminal Justice (via distance)
Design Technology
Early Childhood Education
Education
General Studies
Human Services
Human Services (via distance)
Liberal Arts

Library Technical Assistant (via distance)
Nursing
Paralegal Studies
Paralegal Studies (via distance)
Paramedic Science
Respiratory Care
Visual Communications

Associate of Arts
Liberal Arts

GARY CAMPUS

Associate of Applied Science
Accounting
Accounting (via distance)
Business Administration
Business Administration (via distance)
Computer Information Systems
Computer Information Systems (via distance)
Computer Information Technology
Design Technology (via distance)
Early Childhood Education
Early Childhood Education (via distance)
Electronics and Computer Technology
Hospitality Administration
Human Services (via distance)
Manufacturing & Industrial Technology
Office Administration
Office Administration (via distance)
Paralegal Studies (via distance)
Public Safety

Technical Certificate
Accounting
Business Administration
Computer Information Systems
Computer Information Technology
Early Childhood Education
Early Childhood Education (via distance)

Hospitality Administration
Manufacturing & Industrial Technology
Office Administration
Practical Nursing

Associate of Science
Business Administration
Computer Information Systems
Criminal Justice (via DE)
Early Childhood Education
General Studies
Human Services (via distance)
Liberal Arts
Library Technical Assistant (via distance)
Nursing
Paralegal Studies (via distance)
Paramedic Science
Physical Therapist Assistant
Visual Communications

Associate of Arts
Liberal Arts

INDIANAPOLIS CAMPUS

Associate of Applied Science
Accounting
Accounting (via distance)
Automotive Technology
Business Administration
Business Administration (via distance)
Computer Information Systems
Computer Information Systems (via distance)
Computer Information Technology
Criminal Justice
Design Technology
Design Technology (via distance)
Early Childhood Education (via distance)
Hospitality Administration
Human Services (via distance)
Machine Tool Technology

Manufacturing & Industrial Technology
Medical Assisting
Mortuary Science
Office Administration
Office Administration (via distance)
Paralegal Studies
Paralegal Studies (via distance)
Public Safety
Surgical Technology
Visual Communications

Technical Certificate
Automotive Technology
Design Technology
Early Childhood Education
Early Childhood Education (via distance)
Manufacturing & Industrial Technology
Medical Assisting
Office Administration
Practical Nursing

Associate of Fine Arts
Fine Art

Associate of Science
Accounting
Automotive Technology
Biotechnology
Business Administration
Community Emergency Preparedness and Management
Criminal Justice
Criminal Justice (via distance)
Design Technology
Early Childhood Education
Education
Electronics and Computer Technology
General Studies
Health Information Technology
Human Services
Human Services (via distance)

Liberal Arts
Library Technical Assistant (via distance)
Logistics Management
Nursing
Paralegal Studies (via distance)
Paramedic Science
Radiologic Technology
Respiratory Care
Visual Communications

Associate of Arts
Liberal Arts

KOKOMO CAMPUS

Associate of Applied Science
Accounting
Accounting (via distance)
Automotive Technology
Business Administration
Business Administration (via distance)
Computer Information Systems
Computer Information Systems (via distance)
Computer Information Technology
Construction Technology
Criminal Justice
Design Technology
Design Technology (via distance)
Early Childhood Education
Early Childhood Education (via distance)
Human Services
Human Services (via distance)
Manufacturing & Industrial Technology
Medical Assisting
Office Administration
Office Administration (via distance)
Paralegal Studies
Paralegal Studies (via distance)
Public Safety
Visual Communications

Technical Certificate
Accounting
Automotive Technology
Computer Information Systems
Computer Information Technology
Dental Assisting
Design Technology
Early Childhood Education
Early Childhood Education (via distance)
Manufacturing & Industrial Technology
Medical Assisting
Office Administration
Practical Nursing
Public Safety

Associate of Science
Accounting
Agriculture
Business Administration
Computer Information Systems
Criminal Justice
Criminal Justice (via distance)
Design Technology
Early Childhood Education
Education
General Studies
Human Services
Human Services (via distance)
Liberal Arts
Library Technical Assistant (via distance)
Nursing
Paralegal Studies
Paralegal Studies (via distance)
Paramedic Science
Professional Communication
Surgical Technology
Visual Communications

Associate of Arts
Liberal Arts

LAFAYETTE CAMPUS

Associate of Applied Science
Accounting
Accounting (via distance)
Automotive Technology
Biotechnology
Business Administration
Business Administration (via distance)
Chemical Technology
Computer Information Systems
Computer Information Systems (via distance)
Computer Information Technology
Criminal Justice
Design Technology
Design Technology (via distance)
Early Childhood Education
Early Childhood Education (via distance)
Human Services (via distance)
Manufacturing & Industrial Technology
Medical Assisting
Office Administration
Office Administration (via distance)
Paralegal Studies
Paralegal Studies (via distance)
Surgical Technology

Technical Certificate
Automotive Technology
Business Administration
Dental Assisting
Design Technology
Early Childhood Education
Early Childhood Education (via distance)
Manufacturing & Industrial Technology
Medical Assisting
Practical Nursing

Associate of Science
Agriculture
Automotive Technology
Biotechnology

Business Administration
Computer Information Systems
Criminal Justice
Criminal Justice (via distance)
Design Technology
Early Childhood Education
Education
General Studies
Human Services (via distance)
Liberal Arts
Library Technical Assistant (via distance)
Nursing
Paralegal Studies
Paralegal Studies (via distance)
Respiratory Care
Visual Communications

Associate of Arts
Liberal Arts

LAWRENCEBURG CAMPUS

Associate of Applied Science
Accounting
Accounting (via distance)
Business Administration
Business Administration (via distance)
Computer Information Systems
Computer Information Systems (via distance)
Computer Information Technology
Design Technology
Design Technology (via distance)
Early Childhood Education (via distance)
Electronics and Computer Technology
Human Services (via distance)
Manufacturing & Industrial Technology
Medical Assisting
Office Administration
Office Administration (via distance)
Paralegal Studies (via distance)

Technical Certificate
Accounting
Business Administration
Early Childhood Education (via distance)
Manufacturing & Industrial Technology
Medical Assisting
Office Administration

Associate of Science
Business Administration
Computer Information Systems
Criminal Justice (via distance)
Design Technology
Electronics and Computer Technology
Education
General Studies
Human Services (via distance)
Liberal Arts
Library Technical Assistant (via distance)
Nursing
Paralegal Studies (via distance)
Visual Communications

Associate of Arts
Liberal Arts

LOGANSPORT CAMPUS

Associate of Applied Science
Accounting (via distance)
Business Administration
Business Administration (via distance)
Computer Information Systems
Computer Information Systems (via distance)
Computer Information Technology
Criminal Justice
Design Technology (via distance)
Early Childhood Education
Early Childhood Education (via distance)
Human Services (via distance)
Manufacturing & Industrial Technology
Medical Assisting

Office Administration
Office Administration (via distance)
Paralegal Studies (via distance)

Technical Certificate
Accounting
Business Administration
Computer Information Systems
Computer Information Technology
Early Childhood Education
Early Childhood Education (via distance)
Manufacturing & Industrial Technology
Medical Assisting
Office Administration
Practical Nursing

Associate of Science
Business Administration
Computer Information Systems
Criminal Justice
Criminal Justice (via distance)
Early Childhood Education
General Studies
Human Services (via distance)
Liberal Arts
Library Technical Assistant (via distance)
Office Administration
Paralegal Studies (via distance)
Visual Communication

Associate of Arts
Liberal Arts

MADISON CAMPUS

Associate of Applied Science
Accounting
Accounting (via distance)
Business Administration
Business Administration (via distance)
Computer Information Systems
Computer Information Systems (via distance)

Computer Information Technology
Design Technology
Design Technology (via distance)
Early Childhood Education (via distance)
Human Services (via distance)
Manufacturing & Industrial Technology
Medical Assisting
Office Administration
Office Administration (via distance)
Paralegal Studies (via distance)

Technical Certificate
Accounting
Business Administration
Computer Information Systems
Computer Information Technology
Early Childhood Education (via distance)
Human Services
Manufacturing & Industrial Technology
Medical Assisting
Office Administration
Practical Nursing

Associate of Science
Business Administration
Criminal Justice (via distance)
Design Technology
Electronics and Computer Technology
General Studies
Human Services (via distance)
Liberal Arts
Library Technical Assistant (via distance)
Nursing
Paralegal Studies (via distance)
Visual Communications

Associate of Arts
Liberal Arts

MARION CAMPUS

Associate of Applied Science
Accounting
Accounting (via distance)
Business Administration
Business Administration (via distance)
Computer Information Systems
Computer Information Systems (via distance)
Computer Information Technology
Criminal Justice
Design Technology
Design Technology (via distance)
Early Childhood Education (via distance)
Human Services
Human Services (via distance)
Manufacturing & Industrial Technology
Medical Assisting
Office Administration
Office Administration (via distance)
Paralegal Studies (via distance)

Technical Certificate
Accounting
Business Administration
Computer Information Systems
Computer Information Technology
Early Childhood Education (via distance)
Human Services
Manufacturing & Industrial Technology
Medical Assisting

Associate of Science
Business Administration
Computer Information Systems
Criminal Justice
Criminal Justice (via distance)
Design Technology
General Studies
Human Services
Human Services (via distance)

Liberal Arts
Library Technical Assistant (via distance)
Nursing
Paralegal Studies (via distance)
Radiologic Technology
Visual Communications

Associate of Arts
Liberal Arts

MICHIGAN CITY CAMPUS

Associate of Applied Science
Accounting (via distance)
Business Administration
Business Administration (via distance)
Computer Information Systems (via distance)
Design Technology
Design Technology (via distance)
Early Childhood Education (via distance)
Hospitality Administration
Human Services (via distance)
Medical Assisting
Office Administration (via distance)
Paralegal Studies (via distance)
Surgical Technology

Technical Certificate
Accounting
Business Administration
Design Technology
Early Childhood Education (via distance)
Hospitality Administration
Manufacturing & Industrial Technology
Medical Assisting

Associate of Science
Business Administration
Criminal Justice (via distance)
Education
General Studies
Human Services (via distance)

Liberal Arts
Library Technical Assistant (via distance)
Paralegal Studies (via distance)
Paramedic Science
Respiratory Care
Visual Communications

Associate of Arts
Liberal Arts

MUNCIE CAMPUS

Associate of Applied Science
Accounting
Accounting (via distance)
Automotive Technology
Business Administration
Business Administration (via distance)
Computer Information Systems
Computer Information Systems (via distance)
Computer Information Technology
Construction Technology
Criminal Justice
Design Technology
Design Technology (via distance)
Early Childhood Education
Early Childhood Education (via distance)
Electronics & Computer Technology
Hospitality Administration
Human Services
Human Services (via distance)
Manufacturing & Industrial Technology
Medical Assisting
Office Administration
Office Administration (via distance)
Paralegal Studies
Paralegal Studies (via distance)
Public Safety
Surgical Technology

Technical Certificate
Accounting

Automotive Technology
Business Administration
Computer Information Systems
Computer Information Technology
Construction Technology
Early Childhood Education
Early Childhood Education (via distance)
Hospitality Administration
Human Services
Manufacturing & Industrial Technology
Medical Assisting
Office Administration
Practical Nursing
Public Safety

Associate of Science
Agriculture
Business Administration
Computer Information Systems
Criminal Justice
Criminal Justice (via distance)
Design Technology
Early Childhood Education
Education
Electronics and Computer Technology
General Studies
Hospitality Administration
Human Services
Human Services (via distance)
Liberal Arts
Library Technical Assistant (via distance)
Nursing
Paralegal Studies
Paralegal Studies (via distance)
Physical Therapist Assistant
Visual Communications

Associate of Arts
Liberal Arts

RICHMOND CAMPUS

Associate of Applied Science
Accounting
Accounting (via distance)
Automotive Technology
Business Administration
Business Administration (via distance)
Computer Information Systems
Computer Information Systems (via distance)
Computer Information Technology
Construction Technology
Design Technology (via distance)
Early Childhood Education
Early Childhood Education (via distance)
Human Services (via distance)
Manufacturing & Industrial Technology
Medical Assisting
Office Administration
Office Administration (via distance)
Paralegal Studies (via distance)

Technical Certificate
Accounting
Automotive Technology
Computer Information Systems
Computer Information Technology
Construction Technology
Early Childhood Education
Early Childhood Education (via distance)
Medical Assisting
Office Administration
Practical Nursing

Associate of Science
Agriculture
Business Administration
Computer Information Systems
Criminal Justice (via distance)
Early Childhood Education
Education
General Studies
Human Services (via distance)
Liberal Arts
Library Technical Assistant (via distance)
Manufacturing & Industrial Technology
Nursing
Paralegal Studies (via distance)
Radiologic Technology
Visual Communications

Associate of Arts
Liberal Arts

SELLERSBURG CAMPUS

Associate of Applied Science
Accounting
Accounting (via distance)
Automotive Technology
Business Administration
Business Administration (via distance)
Computer Information Systems
Computer Information Systems (via distance)
Computer Information Technology
Design Technology
Design Technology (via distance)
Early Childhood Education
Early Childhood Education (via distance)
Electronics and Computer Technology
Human Services
Human Services (via distance)
Manufacturing & Industrial Technology
Medical Assisting
Medical Laboratory Technology
Office Administration
Office Administration (via distance)
Paralegal Studies (via distance)
Visual Communications

Technical Certificate
Accounting
Automotive Technology
Business Administration
Computer Information Technology
Design Technology
Early Childhood Education
Early Childhood Education (via distance)
Human Services
Manufacturing & Industrial Technology
Medical Assisting
Office Administration
Practical Nursing

Associate of Science
Business Administration
Computer Information Systems
Criminal Justice (via distance)
Design Technology
Early Childhood Education
Education
General Studies
Human Services
Human Services (via distance)
Liberal Arts
Library Technical Assistant (via distance)
Nursing
Paralegal Studies (via distance)
Respiratory Care
Visual Communications

Associate of Arts
Liberal Arts

SOUTH BEND CAMPUS

Associate of Applied Science
Accounting
Accounting (via distance)
Automotive Technology

Business Administration
Business Administration (via distance)
Computer Information Systems
Computer Information Systems (via distance)
Computer Information Technology
Design Technology
Design Technology (via distance)
Early Childhood Education
Early Childhood Education (distance)
Electronics and Computer Technology
Hospitality Administration
Human Services (via distance)
Interior Design
Manufacturing & Industrial Technology
Medical Assisting
Medical Laboratory Technology
Office Administration
Office Administration (via distance)
Paralegal Studies
Paralegal Studies (via distance)
Public Safety
Visual Communications

Technical Certificate
Accounting
Automotive Technology
Business Administration
Computer Information Systems
Computer Information Technology
Early Childhood Education
Early Childhood Education (via distance)
Manufacturing & Industrial Technology
Medical Assisting
Office Administration
Practical Nursing
Public Safety

Associate of Fine Arts
Visual Communications

Associate of Science
Agriculture

Biotechnology
Business Administration
Computer Information Systems
Computer Information Systems (via distance)
Criminal Justice
Criminal Justice (via distance)
Design Technology
Early Childhood Education
Education
Electronics and Computer Technology
General Studies
Human Services
Human Services (via distance)
Liberal Arts
Library Technical Assistant (via distance)
Nursing
Paralegal Studies
Paralegal Studies (via distance)
Paramedic Science
Respiratory Care
Visual Communications

Associate of Arts
Liberal Arts

TERRE HAUTE CAMPUS

Associate of Applied Science
Accounting
Accounting (via distance)
Automotive Technology
Biotechnology
Business Administration
Business Administration (via distance)
Chemical Technology
Computer Information Systems
Computer Information Systems (via distance)
Computer Information Technology
Design Technology
Design Technology (via distance)
Early Childhood Education
Early Childhood Education (distance)

Electronics and Computer Technology
Human Services (via distance)
Manufacturing & Industrial Technology
Medical Assisting
Medical Laboratory Technology
Office Administration
Office Administration (via distance)
Paralegal Studies (via distance)
Paramedic Science
Public Safety
Surgical Technology
Visual Communications

Technical Certificate
Accounting
Automotive Technology
Early Childhood Education
Early Childhood Education (via distance)
Manufacturing & Industrial Technology
Medical Assisting
Office Administration
Practical Nursing
Public Safety

Associate of Science
Agriculture
Automotive Technology
Biotechnology
Business Administration
Computer Information Systems
Criminal Justice
Criminal Justice (via distance)
Design Technology
Early Childhood Education
Education
Electronics and Computer Technology
General Studies
Human Services
Human Services (via distance)
Liberal Arts
Library Technical Assistant (via distance)
Nursing

Paralegal Studies (via distance)
Radiologic Technology
Respiratory Care
Visual Communications

Associate of Arts
Liberal Arts

VALPARAISO CAMPUS

Associate of Applied Science
Accounting
Accounting (via distance)
Business Administration
Business Administration (via distance)
Computer Information Systems
Computer Information Systems (via distance)
Computer Information Technology
Criminal Justice
Design Technology
Design Technology (via distance)
Early Childhood Education (distance)
Human Services (via distance)
Manufacturing & Industrial Technology
Office Administration
Office Administration (via distance)
Paralegal Studies
Paralegal Studies (via distance)

Technical Certificate
Accounting
Business Administration
Computer Information Systems
Computer Information Technology
Design Technology
Early Childhood Education (via distance)
Human Services
Manufacturing and Industrial Technology
Office Administration
Practical Nursing

Associate of Science
Business Administration
Computer Information Systems
Computer Information Services (via distance)
Criminal Justice
Criminal Justice (via distance)
Design Technology
General Studies
Human Services (via distance)
Liberal Arts
Library Technical Assistant (via distance)
Nursing
Paralegal Studies
Paralegal Studies (via distance)
Pre-Engineering
Visual Communications

Associate of Arts
Liberal Arts

WARSAW CAMPUS

Associate of Applied Science
Accounting (via distance)
Business Administration (via distance)
Computer Information Systems
Computer Information Systems (via distance)
Computer Information Technology
Design Technology (via distance)
Early Childhood Education (via distance)
Human Services (via distance)
Medical Assisting
Office Administration (via distance)
Paralegal Studies (via distance)

Technical Certificate
Accounting
Business Administration
Computer Information Systems
Computer Information Technology
Early Childhood Education

Early Childhood Education (via distance)
Medical Assisting

Associate of Science
Business Administration
Computer Information Systems
Criminal Justice (via distance)
General Studies
Human Services
Human Services (via distance)
Liberal Arts
Library Technical Assistant (distance)
Paralegal Studies (via distance)
Visual Communications

Associate of Arts
Liberal Arts

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FACULTY AND STAFF

IVY TECH
COMMUNITY COLLEGE
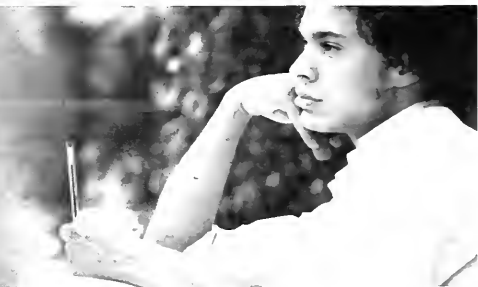
REGION 1

VALTIERRA, JOSE GUADALUPE, Chancellor; BA, Purdue University; MS, JD, Indiana University

THOSTESEN, DAWN, Executive Director of Finance; BS, MS, College of New Jersey

GONZALEZ, R. LOUIE, Executive Dean, East Chicago; BS, Calumet College of Saint Joseph; MPA, Indiana University

HAKLIN, DELORES, Executive Dean, Valparaiso; BA, Simpson College; MS, St. Francis College; PhD, Indiana State University

HUDDLESTON, JERRY L., Executive Dean, Michigan City; BS, MA, Ball State University

HALIK, DEBORAH A., Dean of Academic Affairs; BS, Calumet College of Saint Joseph; MS, Purdue University; PhD, Indiana State University

HOWARD, R. KEITH, Dean of Student Affairs; BA, DePauw University; MPA, ABD, Indiana University

JOHNSON, SHEILA, Assistant Dean of Academic Affairs, Valparaiso; BA, Central Michigan University; MEd, Indiana Wesleyan University; ABD, Indiana State University

POLLARD, LOUISE F., Assistant Dean of Academic Affairs, Gary; BS, Wayne State University; MRC, Arkansas State University

ROSENBLUM, KENNETH, Assistant Dean of Academic Affairs-- Student Success and Advising, Valparaiso; BS, University of Wisconsin; JD, DePaul University

SCHOENFELDER, JOHN H., Acting Assistant Dean of Academic Affairs, Michigan City; AAS, Moraine Valley College; BA, MA, Governors State University

WOROSZ, MICHAEL, Assistant Dean of Academic Affairs; MS, Indiana State University

FACULTY

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ABEYTA, ELIDA, Instructor in Hospitality, Program Chair, East Chicago; AAA, Ivy Tech State College

ADAMSKI, JOHN, Assistant Professor in General Education, Gary; BS, Indiana State; MS, Purdue University

ALSPAUGH, DEBORAH M., Associate Professor in Academic Skills Advancement, Program Chair, Gary; BS, MPA, Indiana University

ARMOR, VANESSA, Instructor in Medical Assisting, Michigan City; AS, Indiana University

BANKS, MARY A., Associate Professor in Offi ce Administration, Program Chair, East Chicago; BS, Alcorn A & M; MS, Indiana University

BERNAL-GARVEY, JOANNE, Instructor in Hospitality, Program Chair, Gary; BS, Calumet College

BOX, TOM, Instructor in Manufacturing Industry Technology, Program Chair, Gary; BA, St. Leo University

BREEN, JANET, Assistant Professor in Accounting, Program Chair, Valparaiso; MS, DePaul University

BUTTERFIELD, BRYON, Instructor in Manufacturing and Industrial Technology, East Chicago; AAS, Ivy Tech Community College

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CATSADIMAS, NICHOLAS C., Instructor in Paralegal Studies, Program Chair, Valparaiso; BS, Valparaiso University; JD, Valparaiso University School of Law

CLARK, HEATHER, Instructor in General Education, East Chicago; MA, Purdue University

COPE, CHARLES T., Instructor in Construction, East Chicago; AAS, Ivy Tech State College; Certified in Steel Framing, American Iron and Steel Institute

DAVIES, SUSAN, Assistant Professor in Early Childhood Education, Program Chair, Gary; MS, Purdue University

DELBY, RICHARD, Instructor in Hospitality, Gary

DENEAL PATRICIA D., Associate Professor in Practical Nursing, Gary; Diploma, St. Mary Mercy; BS, St. Francis; MS, University of Notre Dame

DOUGLAS, JOYCE, Assistant Professor in Nursing, Gary; MS, DePaul University

DOWNS, DALE D., Associate Professor in General Education, Program Chair, Michigan City; BS, Loyola University Chicago; MS, PhD, The University of Illinois at Chicago

DUNBAR, KAREN, Instructor in General Education, Valparaiso; BS, University of Kentucky; MS, Purdue University

DULIN, DARLENE, Instructor in Nursing, Gary; BS, Goshen College

DYE, JAMES, Assistant Professor in Physical Therapist Assistant, Program Chair, Gary; BS, University of Illinois; PhD, Cheighton University Medical Center

ERIKS, MARSHA, Associate Professor in Surgical Technology, Michigan City; AAS, Ivy Tech State College

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FABIAN, ALFRED E., Professor in Business Administration, Program Chair, Gary; BA, University of Georgia; MBA, Roosevelt University

FEUERBACH, ELIZABETH Z., Associate Professor in Computer Information Systems, Program Chair, East Chicago; BS, Calumet College of St. Joseph; MS, Purdue University

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GROSS, LEE, Instructor in Practical Nursing, Valparaiso; MSN, Valparaiso University

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GUTIERREZ, LARRY, Instructor in Tech Prep and Construction Technology, East Chicago

GYURKO, CHARLENE, Associate Professor in Health Science, Valparaiso; BS, Purdue University; MPA, Indiana University-Northwest; MSN, Indiana University-Purdue University Indianapolis; PhD, Indiana State University

HARDER, DIANE, Assistant Professor in Practical Nursing, Valparaiso; MS, Indiana University; EdD, Nova Southern University

HARRIS, DANITA S., Assistant Professor in Respiratory Care, Michigan City; BS, Cabrini College; MPA, Indiana University

HARVEY, ETHEL, Associate Professor in Computer Information Systems, Gary; BS, Purdue University; MBA, Indiana University

HENDERSON, CREOLA, Instructor in Practical Nursing, Gary; BSN, MPA, Indiana University

HERNANDEZ, CARLOS, Assistant Professor in General Education, Program Chair, East Chicago; MD, Industrial University of Santander

HOLLINGSWORTH, GENETHA S., Associate Professor in Academic Skills Advancement, Program Chair, Gary; BS, Fayetteville State University

HORNE, SAUNDRA S., Associate Professor in Practical Nursing, Program Chair, Gary; AAS, Purdue University; BS, MS, College of St. Francis

IDOWU, TOLULOPE, Instructor in General Education, Program Chair, Valparaiso MA, University of Ibadan

IGBOEGWA, EJIKE, Professor in Design Technology, East Chicago, Program Chair; BS, MS, Eastern Illinois University; PhD, University of Illinois

INMAN, BARBARA, Instructor in Practical Nursing, Valparaiso; MSN, Valparaiso University

JEFTICH, DANNY P., Professor in Academic Skills Advancement and General Education, Program Chair, Valparaiso; BA, MS, College of St. Francis

JENKINS, STEPHEN, Instructor in Criminal Justice, Program Chair, Valparaiso MA, Valparaiso University

JONIEC, JOSEPH, Assistant Professor in Accounting, Program Chair, East Chicago; BA, MEd, Loyola University

JOSESKI, TONI, Instructor in General Education, Valparaiso; BS, MS, Purdue University

JORDAN, PARNELL, Instructor in Manufacturing and Industrial Technology, East Chicago; ASME, AWS Welding Certification

KANOLIS, CHRIS F., Associate Professor in Business Administration, Program Chair, East Chicago; BA, MBA, Indiana University

LAYHEW, SUSAN J., Associate Professor in Respiratory Therapy, Program Chair, Michigan City;,BS, Calumet College of St. Joseph; MA National-Louis University

LOVE, NANCY L., Assistant Professor in Practical Nursing, Gary; AAS, Indiana University; BS, Purdue University

LYNCH-JACKSON, TRINA, Assistant Professor in Business, Gary; BS, Saint Joseph College; MPA, Indiana University

MACKOVYAK, ROBERT, Instructor in Construction Technology, Gary

MAS, JOSE, Instructor in General Education, Gary; DVM, National University of Northeast Argentina

MATAVULJ, OLGICA, Instructor in General Education, Valparaiso; BA, Indiana University; MA, Valparaiso University

MCKIDDY, JAMES, Instructor in Welding Technology, Valparaiso; Apprenticeship Certified, American School

MERRILL, DAVID, Associate Professor in General Education, Program Chair, Michigan City; BS, Ramapo College of New Jersey; DC, Palmer College of Chiropractic

MOORE, SANDRA, Associate Professor in Business Administration, Program Chair, Valparaiso; BA, Calumet College of St. Joseph; MA, Purdue University

MURRELL, JIMMIE L., Associate Professor in Automotive Technology, East Chicago BA, Chicago State University; Certifi — The National Institute of Automotive Service Excellence

NEARY, JAMES H., Associate Professor in General Education, Program Chair, Gary; BA, University of Notre Dame; MA, Purdue University .

NESIUS, MARY D., Instructor in Nursing, Program Chair, Valparaiso; BSN, Indiana University Northwest; MSN, CNS, Valparaiso University

OBAJULUWA, VICTOR A., Associate Professor in Physical Therapist Assistant, Gary; BA, MEd, PhD, University of Ibadan

O'DROBINAK, REGINA, Assistant Professor in Nursing, Gary; MSN, Indiana University

OLSON, KATHY G., Assistant Professor in Business Administration, Program Chair, Valparaiso; BA, Tri-State College, MS Ed, Purdue West Lafayette

PAVLAKOVIC, VIKI, Instructor in Medical Assisting, Program Chair; AS, Ivy Tech Community College; Certifi ed Medical Assistant

PLANK, LORA Y., Assistant Professor in Surgical Technology, Program Chair, Michigan City; AAS, Purdue University; Certifi ed Surgical Technologist

RAMIREZ, EVLAYNE, Instructor in Nursing, Valparaiso; BSN, Northern Illinois University; MSN, University of Illinois

REMAR, JOHN M., Full Professor in Business Administration, Program Chair, East Chicago; BGS, Roosevelt University; MS, Chicago State University

RIDDELL, DARRELL, Instructor in Computer Information Systems, Gary; BS, Indiana State University

RIDDLE, JARED M., Assistant Professor in Academic Skills Advancement, Program Chair, East Chicago; BA, Indiana University

RIECKEN, NANCY, Instructor in English, Gary; MA, Purdue University

ROBERTS, TAMARA, Instructor in Office Administration, Program Chair, Gary; BS, Purdue University

ROSILLO, LAURA, Associate Professor in General Education, Program Chair, East Chicago; BA, Indiana University; MD, IU School of Medicine, Indianapolis

RUE, GINA M., Assistant Professor in Computer Information Systems, Gary; AAS, Ivy Tech State College; BS, Calumet College of St. Joseph

SCHOENFELDER, JOHN H., Professor in Business Administration, Program Chair, Michigan City; AAS, Moraine Valley College; BA, MA, Governors State University

SCHODLEY, ANGELA, Instructor in Practical Nursing, Valparaiso; BS, MS, Valparaiso University

SCOTT, SHARON T., Instructor in Medical Assisting, Gary; Certified Laboratory Assistant (ASCP), Indiana University

SIEWERT, JOHN A., Assistant Professor in Automotive Technology, East Chicago; Dupont Certified

SIKOSKI, ACO, Associate Professor in Design Technology, Program Chair, Valparaiso; BA, "Kiril I Metodij" Skopje Macedonia; MS, Purdue University

SMITH-ESTES, GAIL, Associate Professor in Nursing, Program Chair, Gary; BS, MS, Purdue University

SORIA, RICHARD, Assistant Professor in Mortuary Science, Program Chair, East Chicago; BS, Calumet College of St. Joseph; JD, Valparaiso University School of Law

STALEVSKA, LILJANA, Assistant Professor in General Education, Program Chair, Valparaiso; MS, Purdue University

STOWERS, BEVERLY A., Associate Professor in Office Administration, Program Chair, Valparaiso; BA, Cedarville College; MBA, Indiana Wesleyan University

TANASKOSKI, VESNA, Instructor in General Education, Program Chair, Michigan City; BA, MA, Purdue University

WHEELER-ANDREWS, SHARI L., Assistant Professor in Early Childhood Education, Gary; BS, MS, Indiana State University

WILLIAMS, GOMER, Assistant Professor in Manufacturing and Industrial Technology, Program Chair, Valparaiso; AAS, Ivy Tech State College; BS California Coast University

ZYCH, TERRENCE, Instructor in Hospitality, Program Chair, Michigan City; AS, Ivy Tech State College

REGION 2

CALVIN, VIRGINIA, Chancellor; BS, Alcorn State University; MA, New Mexico Highlands University; EdD, Texas Women's University

BATZER, LYN, Dean of Academic Affairs; BS, Northern Illinois University; MS, Indiana University-South Bend; EdD, Western Michigan University

SHAFFER, TERESA, Executive Dean, Elkhart; BS, Indiana University; MEd, Kent State University

MAXSON, RANDY, Executive Dean, Warsaw; BS, Grace College; MEd, Millersville University

FREYMUTH, TRACY, Dean of Student Affairs, South Bend; BS, University of Notre Dame

FACULTY

ADAMCZYK, RICHARD, Assistant Professor in Manufacturing & Industrial Technology, Program Chair, South Bend; BS, University of Krakow; Technical Mechanic and Teacher Degree, Pedagogical Technical School, Kielce (Poland)

ANDREJEVICH, MILAN, Assistant Professor in General Education, South Bend; BA, Indiana University; MA, University of Chicago

BARNES, JOY, Instructor in Practical Nursing, Elkhart; BA, Anderson University; BSN, Indiana University; MSN, Valparaiso University

BOEMBEKE, ANGELA, Associate Professor in Visual Communications, Program Chair, South Bend; BA, Anderson University; MBA, Indiana Wesleyan University

BOROWSKI, GEORGE J., Assistant Professor in Manufacturing & Industrial Technology, Program Chair, South Bend; AAS, Ivy Tech State College; BAS, Siena Heights College

BRINKRUFF, DAVID, Associate Professor in Electronics & Computer Technology, Division Chair, South Bend; BS, Purdue University, MS, Purdue University

BROWN, NANCY, Assistant Professor in Business Administration, Warsaw; BA, Purdue University; MBA, St. Francis College

BURTCH, GALE R., Assistant Professor in Academic Skills Advancement, Elkhart; BA, Indiana University-Bloomington; MS, Indiana University-South Bend

CAMPBELL, MELODY, Assistant Professor in Associate Degree Nursing; BSN, Bethel College; MSN, Ball State University

CARRIGAN, TIMOTHY, Instructor in Hospitality Administration, Program Chair, South Bend; AAS, Grand Rapids Junior College

COMEAU, JOHN, Professor in General Education, South Bend; BA, University of Notre Dame; MS, Indiana University

COTY, MARY, Assistant Professor in Associate Degree Nursing, South Bend; BSN, Ball State University; MSN, Valparaiso University

COUNTS, DENA, Assistant Professor in General Education, South Bend; BA, Abilene Christian University; MA, Abilene Christian University

CURRY, DEBORAH, Assistant Professor in Practical Nursing, South Bend; BSN, Pittsburg State University; MSN, Ball State University

DENBY, CATHY, Assistant Professor in General Education, South Bend; BA, St. Mary's College; MA, Notre Dame University

DOLPH, JOSEPH, Assistant Professor in Technology, Elkhart; BS, Notre Dame University

ELLINGHOUSE, COLETTE, Assistant Professor in General Education, Warsaw; BA, Goshen College; MA, Ball State University

FIORELLA-TEVES, SHARON, Instructor in Associate Degree Nursing, South Bend; BSN, Marycrest College; MS, University of Louisville

FREEL, LINDA, Assistant Professor in Visual Communications, South Bend; BA, Bethel College; MS, Indiana University-South Bend; MFA, University of Notre Dame

FREYGANG, JIM, Assistant Professor in Design Technology, Program Chair, South Bend; AAS, Ivy Tech State College; BFA, St. Francis College

GARRELS, MARTHA, Professor in Medical Assisting, Program Chair, South Bend; BS, Michigan State University; MS, University of Notre Dame

GERBASICH, KAREN, Associate Professor in Nursing, South Bend; BSN, St. Mary's College; MSN, Ball State University

GERDES, EDITH, Associate Professor in Practical Nursing, South Bend; ADN, Purdue University; BHCA, St. Joseph's College; MSN, Ball State University

GICK, DESMOND, Associate Professor in Computer Information Systems, South Bend; BS, Purdue University

GRAY, DAVID, Associate Professor in General Education, Program Chair, South Bend; AB, Indiana University; MD, Indiana University

GRUBER, ELLEN, Associate Professor in Academic Skills Advancement, South Bend; BS, Eastern Illinois University; MS, Northern Illinois University

GUTHRIE, LOUISE, Assistant Professor in Business, Elkhart; BS, Indiana University; MBA, University of Nebraska

HACKEMANN, SANDRA, Assistant Professor in General Education, Elkhart; BA, Millsaps College; MA, George Peabody College

HALL, CHARLES, Assistant Professor in General Education, South Bend; BS, MS, PhD, University of Notre Dame

HAMMONDS, BONNIE, Instructor in Practical Nursing, South Bend; BSN, Indiana University

HARPER, NORA, Instructor in Associate Degree Nursing, South Bend; LPN, Utah Technical College; ADN, Weber State College; BSN, Weber State College

HARRIS, IMOGENE, Associate Professor in Business, Division Chair, South Bend; BS, Southern University

HAWKINS, VIOLET, Instructor in Paralegal, Division Chair, South Bend; BA, Howard University; JD, Howard University

HEETER, CAROL, Assistant Professor in Business Administration, Elkhart; BS, MBA, Indiana University

HELLYER, TIM, Instructor in Paramedic, Program Chair, South Bend; BA, National-Lewis University; MA, Aurora University

HIERS, JUDY, Associate Professor in Office Administration, Program Chair, South Bend; AAS, Delta College; BS, Western Michigan University; MS, Indiana State University

HINKLE, WILLIAM, Assistant Professor in Criminal Justice, Program Chair, South Bend; BA, Indiana University; MPA, Indiana University; PhD, Western State University

HORNER, MARY ANN, Instructor in Practical Nursing, South Bend; BSW, St. Mary of the Woods College; BSN, Bethel College

HUDERWITZ, PATRICIA, Instructor in Nursing, South Bend; BSN and MSN, Seton Hall University

HUETTL, ROBERT, Assistant Professor in Automotive Technology, Program Chair, South Bend; AS, University of Wisconsin-Barron County Campus; BS, University of Wisconsin-Stout

JOHNS, TERRY, Assistant Professor in General Education, Elkhart; BS, MA, Indiana University

KENT, KATHERINE, Professor in Interior Design, Division Chair, South Bend; BS, Andrews University; MA, Western Michigan University

KEUSCH, DONNA, Assistant Professor in Nursing, Program Chair, South Bend Diploma, Memorial Hospital School of Nursing; BSN, Indiana University; MSN, Valparaiso University

KING, CHERYL, Assistant Professor in Environmental Design, Program Chair, South Bend; BS, Western Michigan University

KIRKNER, CAROL, Professor in Medical Laboratory Technician, Division Chair, South Bend; BS, Kent State University; MS, University of Notre Dame

KRAKOWSKI, BETH, Assistant Professor in Practical Nursing, Program Chair, South Bend; Diploma, Memorial Hospital School of Nursing; BSN, University of Evansville; MSN, Ball State University

LAGADON, P. BEN, Assistant Professor in Manufacturing and Industrial Technology, Program Chair, South Bend; BA, Indiana University

LANKSTON, THOMAS, Assistant Professor in Academic Skills Advancement, South Bend; BS, Purdue University; MS, Michigan State University

LEDSOME, DANIEL, Assistant Professor in General Education, South Bend; BA, Muskingum College; MA, Miami University

LUTZ, MARK, Assistant Professor in General Education, South Bend; BA, University of Southern California; MA, University of Notre Dame

MEASELL, NANCY, Assistant Professor in Medical Assisting, South Bend; AAS, J. Sargent Reynolds Community College; BA, Winthrop College

MORR, CHRIS, Assistant Instructor in Manufacturing and Industrial Technology, Warsaw

NEGAHBAN, RAHIM, Associate Professor in Electronics and Computer Technology, Program Chair, South Bend; AS, J. C. Calhoun State Community College; BS, University of Alabama; MSEE, Tuskegee Institute

NOWLIN, BRUCE, Assistant Professor in Early Childhood Education and Human Services, Department Chair, South Bend; BS, Ball State University; MS, Ball State University

NSEULA, MICHAEL, Instructor in Computer Information Systems, Program Chair, South Bend; BA, Indiana University

OSIRO, MESHACK, Assistant Professor in Computer Information Systems, South Bend; BA, Bluffton College; MA, Ohio University

PARMLEY, CRAIG, Assistant Professor in General Education, South Bend; BS, Indiana State University; MBA, Indiana Wesleyan

PAUL, DEBRA, Assistant Professor in Medical Assisting, Warsaw; TC, AAS, Ivy Tech State College; BA, Tri State University

PEARSON, SUSAN, Assistant Professor in Respiratory Care, Program Chair, South Bend; AS, Indiana University; BA, DePaul University; MPA, Indiana University

PENROSE, DEBRA, Assistant Professor in Medical Assisting, Elkhart; BS, University of Texas Pan American

PHILLIPS, JOANNE, Instructor, Human Services, Program Chair, South Bend; AA, Lake Michigan College; BA, Sienna Heights University; MS and MSW, Indiana University South Bend

POWELL, JAMES, Professor in General Education, Division Chair, South Bend; BS, Rose-Hulman Polytechnic Institute; PhD, University of Notre Dame

PRIMROSE, PAMELA, Associate Professor in Medical Laboratory Technician, Program Chair, South Bend; BS, Indiana University; MS, University of Maryland

RIVERA, MICHAEL, Assistant Professor in Computer Information Systems, Elkhart; BS, MBA, Taylor University

RUFUKU, CHARLES, Assistant Professor in General Education, Elkhart; BA, College Du Saint Espirit; MD, Moscow Medical

SATTLER, LAURAN, Assistant Professor in Computer Information Systems, Warsaw; AAS; Ivy Tech State College; BS, Goshen College

SHEAKS, CRAIG, Instructor in Visual Communications, South Bend; BFA, Indiana University

SMYERS, HARRY, Instructor in Automotive Services, South Bend TC, Ivy Tech State College; BS, Indiana State University

STEVENS, JULIA, Assistant Professor in Nursing, South Bend; Diploma, Lincoln General Hospital School of Nursing; BS, Nebraska Wesleyan University; BSN, Central Missouri State University; MS, Andrews University

STRATTON, SANDRA, Assistant Professor in Paralegal, Program Chair, South Bend; BA, Albion College; JD and MBA, Washington University

TORMA, JAN, Instructor in Practical Nursing, South Bend; BSN, Ball State University

TUTHILL, MARY, Assistant Professor in Visual Communications, South Bend; BA, Indiana University

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VANOOSTERUM, CYNTHIA, Associate Professor in Accounting, Program Chair, South Bend; BS, MBA, Indiana University-South Bend

WALTZ-FREEL, KATHRYN, Professor in Academic Skills Advancement, Department Chair, South Bend; BA, Montana State University; MS, Indiana University

WOLFSON, COLETTE, Associate Professor in Business Administration, Program Chair, South Bend; BS, Indiana University; MS, Indiana University

WYMAN, PATSY, Assistant Professor in Hospitality, South Bend; BS, University of Michigan; MA, University of North Carolina

YOUNG, ROGER, Assistant Professor in Computer Information Systems, South Bend; BA, Columbia College; MS, Ferris State University

REGION 3

KEEN, MARK A., CHANCELLOR, FORT WAYNE; AAS, BS, ITT Technical Institute, MS, Indiana Wesleyan University; PhD, Indiana State University

BAKER, RUSSELL D., Dean of Academic Affairs, Fort Wayne; BA, Huntington University; MA, Kent State University; EdD, Ball State Univ.

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FACULTY

BARLOW, CHRISTINE E., Assistant Professor in Science, Fort Wayne; BS, MS, Purdue University

BARNES, MARC, Instructor, Program Chair; BS, M.Phys.Ed., and PhD, University of Nebraska

BARNETT-JOHNSON, KIM R., Assistant Professor in General Education, Division Chair, Fort Wayne; BS, Taylor University; MLS, Indiana University

BAUSSER, JANET, Assistant Professor in General Education, Fort Wayne BA, University of California; MLS, Univeristy of Hawaii; PhD, Ohio State University

BICKNASE, BERNICE L., Instructor in Therapeutic Massage, Program Chair, Fort Wayne; AAS, Ivy Tech State College; BS, Indiana Institute of Technology

BISSELL, THERESA, Assistant Professor in General Education, Program Chair, Fort Wayne; BA, DePauw University; MS, Purdue University

BONEFF, ROSE L., Assistant Professor in Respiratory Care, Director of Clinical Education, Fort Wayne; RRT-NPS, AS, BS, Indiana University

BOSTWICK, PAULA R., Assistant Professor in ASN, PN, Department Chair, Fort Wayne; RN, BSN, MSN, Ball State University

BRADSHAW, MARY ANNA, Assistant Professor in Human Services, Fort Wayne; AB, Indiana University; MS, St. Francis College

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CHRISTMAN, JOHN, Assistant Instructor in Manufacturing and Industrial Technology, Fort Wayne; TC, Indiana Vocational Technical College; CWE, CWI, American Welding Society

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DANTZER, BRANDY, Assistant Instructor in Nursing, Fort Wayne; BNS, Indiana Wesleyan University

DILLER, JEWEL K., Associate Professor in Practical Nursing, Fort Wayne; RN, BS, Fort Wayne Bible College; MSEd, Indiana University; MSN, Concordia University

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FAGAS, DEBORAH L., Assistant Professor in ASA Reading; BA, Indiana University; MA, Ball State University

FALK, JOHN E., Assistant Professor in Construction Technology, Program Chair, Fort Wayne Licensed Journeyman Plumber; Licensed Plumbing Contractor; BAM, Tri State University

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HALL, DANIEL, Instructor, Fort Wayne; BS, Ball State University; MS, Indiana University

HAMM, RONALD, Program Coordinator in Fire Science, Fort Wayne; BS, University of Cincinnati

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INGALLS, JAMES G., Assistant Professor in Academic Skills Advancement, Fort Wayne; BS, Austin Peay State University

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JOHNSON, LAURIE, Instructor, Program Chair, Fort Wayne; BS, Purdue University; MEd, University of Wisconsin LaCrosse

JORDAN, DENISE M., Assistant Professor in Practical Nursing, Fort Wayne; RN, BSN, Indiana University; MA, Ball State University,

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KEATHLEY, MICHAEL W., Associate Professor in General Education, Program Chair, Fort Wayne; BA, Michigan State University; MA, Wayne State University

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LONG, JOSHUA, Instructor in Economics, Fort Wayne; BA, Wadhams Hall Seminary College; MA, Walsh College; PhD, Capella

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MORGAN, PHIL, Instructor in Automotive Services, Fort Wayne; TC, Minnesota State University

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PULLING, RICHARD F., Instructor in General Education, Fort Wayne; BA, Tufts University; MDiv, Chicago Theological Seminary; DMin, Bangor Theological Seminary

REILLY, KAREN L., Academic Skills Advancement Division Chair, Fort Wayne; BA, MPA, Indiana University

ROBERTS, KRISTIN, Instructor, Fort Wayne; BS, Indiana University

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ROTHGEB, MARCIA, Assistant Professor in Practical Nursing, Fort Wayne; RN, AAS, Purdue University; BA, College of Saint Francis

ROYSE, BRIAN L., Assistant Professor in General Education, Fort Wayne; BA, MA, Indiana University

RUYLE, REBECCA, Instructor, Fort Wayne; AS, Purdue University; BS, Baptist Bible College; MS, Indiana University Purdue University Fort Wayne

RYBDLT, RUSSELL H., Assistant Professor in Paralegal, Fort Wayne; BA, Indiana University; JD, Valparaiso University

SCHLADENHAUFFEN, CANDACE S., Assistant Professor in Respiratory Care, Division Chair, Fort Wayne; RRT-NPS, RPFT, BS, Indiana University; MS, Purdue University

SHATTUCK, CAROL, Assistant Professor in Practical Nursing, Fort Wayne BS, University of St. Francis; MS, Indiana University; MSN, Indiana Wesleyan

SHEARER, JAMES C., Assistant Professor in Construction Technology, Fort Wayne BA, Tri-State University

SIMMONS, JEFFREY L., Assistant Professor in Academic Skills Advancement, Fort Wayne; BA, Taylor University; BS, Ball State University; MDiv, Anderson School of Theology

SLATER, JAMES M., Assistant Professor in General Education, Fort Wayne; BS, Purdue University; MS, Eastern Michigan University; DO, Kirksville College of Medicine and Surgery

SPRADLIN, CHRISTOPHER D., Instructor in Academic Skills Advancement, Program Chair, Fort Wayne; BA, Cedarville University; MA, Concordia Theological Seminary

STEELE, LAURA, Assistant Professor in General Education, Fort Wayne; BS, MS, Purdue University

STONEBRAKER, BEN A., Assistant Professor in Computer Information Systems, Fort Wayne; AAS, Indiana Vocational Technical College; BS, Purdue University

STROUP, DONALD L., Assistant Professor in Computer Information Systems, Fort Wayne; BS, Purdue University; MBA, Michigan State University

SUDDITH, ROBERTA, Assistant Professor, Fort Wayne; BA, St. Francis College; MS, Walden University

SULLENS, BARRY J., Assistant Professor in Computer Information Systems, Fort Wayne; AA, Anderson College; BS, Lander University; MEd, Capella

SURFACE, MICHAEL O., Assistant Professor in Manufacturing and Industrial Technology, Fort Wayne; BS, Purdue University

THIERER, NINA L., Associate Professor in Medical Assisting, Fort Wayne; AAS, Indiana Vocational Technical College, BS, Indiana Institute of Technology, CMA

TOWNSEND, ROBERT, Instructor in Design Technology, Program Chair, Fort Wayne; BS, Northeastern University

TREFF, CONRAD C., Assistant Professor in Manufacturing and Industrial Technology, Fort Wayne; BS, Fairleigh Dickinson University

TSAKOVA, MARIA, Assistant Professor in Academic Skills Advancement, Fort Wayne; BA, Saints Cyril and Methodius University; MLS, Indiana University

VARGA, ANDREW, Assistant Instructor, Fort Wayne; BS, Indiana Wesleyan University; MS, Capella University

VICK, JAN S., Assistant Professor in Human Services, Program Chair, Fort Wayne; BS, Ball State University, MS, Saint Francis College

WALSH, JOHN D., Assistant Professor in General Education, Fort Wayne; BS, University of Notre Dame; MS, Wesleyan University

WALTER, JOHN L., Associate Professor in Manufacturing Technology, Fort Wayne; AAS, Indiana Vocational Technical College; BS, Indiana Wesleyan University; MA, Ball State University

WEISS, ANNA C., Assistant Professor in Accounting, Fort Wayne; BA, Middlebury University; MSEd, Indiana University, CPA

WIEGAND-GREEN, TOVA, Assistant Professor in Medical Assisting, Fort Wayne; BS, Purdue University, CMA

WYNEKEN, MESHELE G., Assistant Professor in Hospitality Administration, Fort Wayne; RD, Saint Francis Medical Center; AA, Ivy Tech State College; BS, Illinois State University

REGION 4

BATHE, DAVID, Chancellor; AS, Vincennes University; BS, Greenville College; MS, PhD, Illinois State University

OSTRYE, MARY E., Dean of Academic Affairs; BS, MS, West Virginia University; PhD, Indiana State University

ROSWARSKI, TODD E., Assistant Dean of Academic Affairs; BA, MS, PhD, Purdue University

LAWS, JOHN, Dean of Student Affairs, Lafayette; BS, MS, Southern Illinois University; EdD, Indiana University

FACULTY

ABEL, CINDY A., Assistant Professor in Medical Assisting, Lafayette; AAS, Ivy Tech State College; BS, Indiana Wesleyan University

ADDISON, PAUL, Associate Professor in Computer Information Systems, Lafayette; BA, Indiana University; MS, Purdue University

ALEXANDER, STANLEY W., Associate Professor in Psychology, Lafayette; BA, Cornell University; MEd, Boston College; PhD, University of Michigan

BAWA, SATISH, Associate Professor in Business Administration, Lafayette; BA, Dehli University; M.BA, Xavier University

BLACK, AMY L., Instructor in Academic Skills Advancement, Lafayette; BS, St. Joseph College; MA, University of Phoenix

BOLINGER, CINDY A., Assistant Instructor in Medical Assisting, Lafayette; AAS, Ivy Tech Community College

BRODSKY, JANET J., Assistant Professor in Life Sciences, Program Chair, Lafayette; BA, Clark University; MA, Purdue University

BUNNING, ALAN R., Assistant Professor in Computer Information Technology, Lafayette; BS, Purdue University

CARREON, CARA L., Instructor in Respiratory Care, Lafayette; AAS, El Paso Community College; BS, Indiana Wesleyan University

COGHILL, WILLIAM M., Instructor in Criminal Justice, Division Chair, Lafayette; BA, MS, Purdue University

COMBS, JONATHON D., Assistant Professor in Design Technology, Lafayette; BS, Purdue University

CREE, CHAD V., Assistant Professor in Computer Information Technology, Lafayette; BS, MS, MA, Ball State University

DEADMAN, ROBERT, Assistant Professor in Business, Division Chair, Lafayette; AAS, BS, Purdue University; MSM-IT, Colorado Technical University

DELAPLANE, BRUCE L., Instructor in Elementary Education, Program Chair, Lafayette; BS, Ball State University; MS, Purdue University

DOLK, KAREN L., Professor in Nursing, Department Chair, Lafayette; BSN, University of Pittsburgh; MSN, Case Western Reserve University

DUDA, MARSHA K., Professor in Practical Nursing, Program Chair, Lafayette; AS, Purdue University; BSN, Michigan State University; MSN, Indiana University

DYE, DEBORAH K., Assistant Instructor in Nursing, Lafayette; AS, Ivy Tech State College; BSN, Indiana Wesleyan University

ERSKIN, ERIC L., Assistant Professor in Automotive Technology, Program Chair, Lafayette; AAS, Montcalm Community College; BS, Ferris State University; MA, Northern Michigan University

FAUST, JUDITH I., Assistant Professor in Nursing, Lafayette; BSN, MSN, Ball State University

GORDON, JAMES A., Instructor in Business Administration, Lafayette; BS, Purdue University; MBA, Finance University of Houston

GUERRETTAZ, SARAH E., Assistant Professor in English, Lafayette; BS, Indiana State University; MEd, Bowling Green State University

GUNDLACH, ERICH, Instructor in Chemical Technology, Lafayette; MS, Chemistry, Ohio State University

GUSTUS, LISA A., Assistant Instructor in Nursing, Lafayette; TC and AS, Ivy Tech Community College; BNS, Indiana Wesleyan University

GUTHRIE, AMANDA J.., Instructor in Surgical Technology, Lafayette; AAS, Ivy Tech State College; BA, Purdue University

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HERRON-JOHNSON, HEIDI L.., Assistant Professor in Spanish, Lafayette; BA, Drew University; MA and PhD, Purdue University

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ISAACS, JACOB P., Associate Professor in Communication, Lafayette; BA, Wabash University; MA, Ball State University

JAMES, PEGGY S., Professor in Respiratory Care, Program Chair, Lafayette; AAS, Lansing Community College; BS, MBA, Indiana Wesleyan University

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KOPSAS, DANIEL, Mathematics Faculty Fellow, Lafayette; MS, Missouri State University

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LUCAS, DONALD A., Assistant Professor in Design Technology, Program Chair,; Lafayette; BS, MS, Purdue University

MADIS, DARRIN, English Faculty Fellow, Lafayette; MA, Cleveland State University

MANIAK, LYNN M., Professor in Nursing, Lafayette; Diploma in Nursing, St. Mary's Mercy Hospital; BSN, Valparaiso University; BS, College of St. Francis; MSN, Purdue University-Calumet

MANIAN, VYJU V., Instructor in Mathematics, Lafayette; BS, MS, University of Bombay; MS, University of Pittsburgh; MS, Columbia University

MARION, WES S., Instructor in Paralegal Studies, Program Chair, Lafayette; BA, Purdue University; JD, Indiana University

MCANDREWS, M. CHARLENE, Assistant Instructor in Nursing, Lafayette; BS, Indiana University

MCANDREWS, DENNIS P., Instructor in Industrial Maintenance and Computer Integrated Manufacturing, Program Chair, BS, Purdue University

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MERCIER, WILLIAM C., Assistant Professor in Mathematics, Program Chair, Lafayette; BA, University of Colorado; MS, University of Cincinnati

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MILLER, JOLENE K., Professor, School of Health Sciences, Lafayette; AS, University of Southern Indiana; BS, College of St. Francis; MS, Purdue University

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MUELLER, KEN S., Associate Professor in History, Lafayette; BA, MA, Southern Illinois University

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NEES, VICKI L., Associate Professor in Nursing, Lafayette; AAS, Purdue University; BSN, Purdue University; MSN, Purdue University

NIELSON, KAREN E., Assistant Professor in Criminal Justice, Program Chair, Lafayette; BA, Eastern Nazarene College; MS, JD, University of Connecticut

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PRATER, BARBARA G., Special Projects to the Office of the Chancellor, and Associate Professor in Chemistry, Lafayette; BA, University of Texas; PhD, University of Kansas

PRIEST, ROGER D., Assistant Professor in Communication, Program Chair, Lafayette; BA, MA, Purdue University

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RISK, KATHLEEN M., Instructor in Academic Skills Advancement, Program Chair, Lafayette; BA, MA, Purdue University

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SCHUSTER STAIR, DIANNA R., Associate Professor in Office Administration, Program Chair, Lafayette; BS, MS, Purdue University

SMOCK, WARREN W., Associate Professor in Accounting, Program Chair, Lafayette; BS, University of Indianapolis; MBA, Indiana Wesleyan University

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TICEN, MELISSA K., Assistant Instructor in Dental Assisting, Program Chair, Lafayette; TC, Ivy Tech Community College

TREES, SUSAN A., Instructor in Academic Skills Advancement, Lafayette; BA, Butler University; MS, Indiana University

UMBACK, J. RYAN, Faculty Fellow in Business Administration, Faculty Fellow in Economics, Lafayette; BS and MS, Purdue University

WATSON, LINDA J., Professor in Business Administration, Program Chair, Lafayette; BS, Miami University; MS, University of Cincinnati

WEALING, JOAN, Assistant Professor in Computer Information Systems, Lafayette; BS, Taylor University; MSM-IT, Colorado Technical University

WENDALL, ROBERT K., Assistant Professor in Mathematics, Lafayette; BS, MS, Purdue University

WIESE, MARY B., Associate Professor in Nursing, Lafayette; BSN, Ball State University; MS, Purdue University

WILLIAM, COLIN T., Assistant Professor in Psychology, Program Chair, Lafayette; BA, Berry College; MA, PhD, Emory University

REGION 5

DAILY, STEPHEN J., Chancellor; BS, MS Indiana University-Kokomo

LEWIS, PAMELA J., Dean of Academic Affairs; BS, Indiana University; MA, Ball State University; PhD, Indiana State University

GUTHRIE, PAM, Dean of Student Affairs; BA, University of Massachusetts; MS, Purdue University

BAILEY, JANICE L., Campus Dean, Logansport; BS, Indiana University; MA, Ball State University

WILSON, JANE, Assistant Dean of Academic Affairs; BS, MA, Ball State University

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FACULTY

ANDERSON, DONALD, Assistant Professor in Physics, Kokomo; BS, Wisconsin State College; BS, PhD, Purdue University

BARR, DARCI, Instructor in Dental Assistant, Program Chair, Kokomo; CDA

BATY, DAVID E., Associate Professor in Accounting, Program Chair, Kokomo; BS, MA, Ball State University

BETZNER, DAVID, Instructor in Public Safety Technology, Program Chair, Kokomo; BS, MA, Columbia Pacific University

BORSE, GREGORY, Assistant Professor in English, Wabash; BA, MA, University of Dallas; PhD, Louisiana State University

BUNKER, KATHY, Instructor in Medical Assisting, Logansport; AAS, Harper College

BYRD, JULIE, Instructor in Computer Information Systems, Logansport; BS, Indiana Wesleyan University

CALDWELL, KIM, Assistant Professor in Mathematics, Kokomo; BS, Purdue University; MS, Indiana University

CHALFIN, JOHN, Instructor in Paramedic Science, Program Chair, Kokomo; BS, Indiana University

CROUCH, BENJAMIN, Instructor in Computer Information Technology, Wabash; BS, MS, Ball State University

ERNY, MICHAEL, Instructor in Automotive Technology, Program Chair, Kokomo; AAS, Ivy Tech Community College

FERRIES, KENNETH, Instructor in Political Science, Program Chair, Kokomo; BA, JD, Indiana University

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GALLAHAN, LAURA, Instructor in Practical Nursing, Logansport; BSN, Indiana University

GARDNER, RANDALL, Associate Professor in HVAC, Program Chair, Kokomo; AAS, Ivy Tech State College; AS, BS, Indiana State University; MSM, Ball State University

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HECKMAN, ANGELA, Assistant Professor in Nursing, Kokomo; BSN, Indiana Wesleyan University; MSN, Indiana University

HENRY, MARIAN, Instructor in Nursing, Logansport; BS, Indiana University

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HOLSAPPLE, MICHAEL, Assistant Professor in Criminal Justice, Logansport; BA, Indiana University; MS, Indiana State University

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KUNKLE, ALAN, Assistant Professor in Mathematics, Program Chair, Kokomo; BS, MS, Purdue University

LATHAM, CRAIG, Instructor in Manufacturing and Industrial Technology, Wabash; BS, Letourneau College

LAUDERBAUGH, LINDA, Assistant Professor in Practical Nursing, Kokomo; BS, Indiana University; MSN, University of Southern Indiana

MARCUM, HEATHER, Instructor in Practical Nursing, Kokomo; BSN, Indiana University

MCCLAIN, NATHAN, Assistant Professor in Industrial Apprenticeship Technology, Program Chair, Kokomo; BS, Purdue University

MCCAULEY, AMY, Assistant Professor in English, Kokomo; BA, Butler University; MA, Ball State University

MCELVEEN, JENNIFER, Instructor in Practical Nursing, Logansport; BSN, Indiana University

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MILLER, JERRY, Instructor in Education, Program Chair, Kokomo; BS, MS, Ball State University

MOORMAN, THOMAS, Instructor in Business Administration, Wabash; BA, Wabash College; MBA, University of Phoenix

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PERKINS, JERRY, Assistant Professor in Computer Information Systems and Computer Information Technology, Program Chair, Kokomo; BS, Indiana University; MS, Webster University; MBA Troy State University

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PETERSON, DANEL, Instructor in Nursing, Kokomo; AS, BS, MSN, Indiana University

PIERCE, TONYA, Assistant Professor in Computer Information Systems, Kokomo; BS, MS, Ball State University

PRICE, LISA, Instructor in Nursing, Kokomo; BSN, Indiana University

PRITCHETT, JOHN E., Assistant Professor in Construction Technology, Program Chair, Kokomo; AS, Linn Technical College; BS, Indiana State University

ROCKEY, JOSHUA, Instructor in Communication, Program Chair, Kokomo; BA, MA, Ball State University

SAWYERS, ANNETTE, Instructor in Practical Nursing, Wabash; BS, Marian College; MS, University of Southern Indiana

SIEMENS, ELIZABETH, Assistant Professor in English, Logansport; BS, Indiana State University; MS, Purdue University

SLUSHER, PATRICIA, Assistant Professor in Medical Assisting, Program Chair, Kokomo; BS, Indiana University

SROTYR, EDITH, Instructor in Medical Assisting, Kokomo; AAS, Ivy Tech Community College

STEELE, KENNETH, Instructor in Business Administration, Kokomo; BS, MBA, Fontbonne University

THIBOS, RONALD, Assistant Professor in Industrial and Manufacturing Technology, Program Chair, Logansport; BS, MS, Indiana State University

TOWNSEND, JUDITH, Instructor in Surgical Technology, Program Chair, Kokomo; BSN, Purdue University

TURNPAUGH, VEARL D., Associate Professor in Manufacturing and Industrial Technology, Kokomo; BS, MS, Purdue University

VYAIN, SALLY, Assistant Professor in Psychology, Program Chair, Kokomo; BS, MA, Ball State University

WARD, DAN, Assistant Professor in Design Technology, Program Chair, Kokomo; BS, Purdue University

WARD, LUKE, Assistant Professor in Visual Communications, Kokomo; BS, Purdue University

WILEY, KYLE, Assistant Professor in Visual Communications, Program Chair, Kokomo; BS, Purdue University

WILSON, MARIANNE, Instructor in Paralegal Studies, Program Chair, Kokomo; BA, University of Rochester; JD, Indiana University

WILLIAMS, KELLY, Assistant Professor in Nursing, Program Chair, Kokomo; MSN, Indiana Wesleyan University

REGION 6

CHESTERFIELD, GAIL, Chancellor; BS, Indiana University, MA, Ball State University, ABD, Indiana University

HUGHES, GEORGE, Executive Dean, Anderson; BA, Belmont University; M.DIV, Southern Baptist Theological Seminary

LIGHTLE, JOHN, Executive Dean, Marion; BS, MA, EdD, Ball State University

STOOPS, SHARON, Acting Dean of Academic Affairs, Muncie; BS, MAE, Ball State University, ABD, Indiana State University

LEWELLEN, MARY, Dean of Student Affairs, Muncie; BS, MA, Ball State University

FACULTY

ADAMS, SHARON, Instructor in Nursing, Muncie; ASN, Floyd College; BSN Ball State University

ANTHONY, NEIL, Associate Professor in Liberal Arts and Sciences, Chair of the School; Muncie; BS, MA, Ball State University

BARDONNER, STEVE, Assistant Professor in Design Technology, Program Chair; AAS, Ivy Tech State College; BS, Ball State University; MA, IUPUI

BISHOP, DANNA, Associate Professor in Office Administration, Program Chair, Marion; BS, Indiana State University; MAE, Indiana Wesleyan University

BRINKLEY, HAROLD, Assistant Professor in Manufacturing and Industrial Technology, Program Chair, Anderson; AAS, Ivy Tech State College; BS, Indiana Wesleyan University

BROOKBANK, KATHLEEN, Instructor in Nursing, New Castle; BSN, MSN, Ball State University

CAIN, ROBERT, Instructor in Surgical Technology, Program Chair, Muncie; AAS, Ivy Tech Community College, BS, Indiana University

CONWELL, TAMRE, Assistant Professor in Early Childhood Education, Muncie; BA, MA, Ball State University

CULP, SID, Assistant Professor in Design Technology, Anderson/Marion; BS, Ball State University

DANA, KRISTEN, Instructor in Academic Skills, Muncie; BS, Ball State University

DIETZEN, KARRIE, Assistant Professor in Nursing, Muncie; AD, Anderson University; BS, Indiana Wesleyan University; MSN, University of Phoenix

DILLMAN, DEBRA, Assistant Professor in Radiologic Technology, Program Chair, Marion; BS, Indiana Wesleyan University

EVERETT, ARNOLD, Assistant Professor in Academic Skills, Marion; BS, MAE, Ball State University

FRY, J. OWEN, Assistant Professor in Academic Skills, Acting Department Chair, Muncie; BS, MAE, Ball State University

GILBERT, LARRY, Associate Professor in Liberal Arts and Sciences, English/Foreign Language, Anderson; AB, Anderson University; MA, Ball State University

GOODMAN, STEPHANIE, Assistant Professor in Medical Assisting, Program Chair, Marion; BS, Ball State University

GOSSETT, KRIS, Assistant Professor in Business Administration, Muncie; BS, Otterbein College; MBA, Morehead State University

GOULD, SUZANNE, Associate Professor in Liberal Arts and Sciences; Program Chair for Life Sciences, Anderson; BA, University of Illinois-Urbana; MS, University of Illinois-Chicago

GOURLEY, DEBBIE, Assistant Professor in Hospitality Administration, Program Chair, Muncie; BS, MA, Ball State University

GREENAN, MARY, Associate Professor in Academic Skills, Anderson; BS, University of Maine; MS, Butler University

GRIFFIN, OBRIN, Assistant Professor in Electronics, Program Chair, Anderson; BS, University of Sierra Leone; MSEE, University of Evansville

GROGG, ELKE, Instructor in the School of Liberal Arts and Sciences; Program Chair for Social Sciences, Muncie; BS, MA, Ball State University

HANSON, GREG, Assistant Professor in Computer Information Systems/Technology, Anderson; AAS, Ivy Tech State College; BS, Free Will Baptist College; MS, Ball State University

HARDMAN, TERESA, Assistant Professor in Nursing, Muncie; BSN, MSN, Ball State University

HARTIG, DAVID, Associate Professor in Construction Technology, Program Chair, Muncie; AAS, Western Wisconsin Technical Institute; BS, University of Wisconsin-Stout

HAWES, MAUREEN, Instructor in Nursing, Anderson; BSN, Ball State University

HAYES, DAVID, Assistant Professor in Computer Information Systems/Technology, Program Chair, Muncie; BS, MS, Ball State University

HICKS, MICHELLE, Assistant Professor in Nursing, Muncie; BSN, MSN, Ball State University

HIDAY, MARY, Associate Professor in Nursing, Program Chair, Muncie; AD, Anderson College; BSN, Anderson University; MA, Ball State University

HOBBS, LORI, Assistant Professor in Physical Therapist Assistant, Muncie; AS, Oklahoma City Community College; BS, Indiana University; MA, Ball State University

HOFFMAN, NANCY J., Professor in Early Childhood Education, Program Chair, Muncie; BS, Penn State University, MA, Ed.d, Ball State University; PhD, Ball State University

HORRELL, LATISHA, Instructor in Liberal Arts and Sciences, Program Chair for Psychology, Marion; BA, MS, Ball State University

HOUSHOLDER, DONALD, Assistant Professor in Liberal Arts and Sciences, Program Chair for Mathematics, Anderson/Marion; BA, Anderson University; MA, Ball State University

HUFF, NEIL, Instructor in Public Safety, Program Chair, Muncie; AS, Indiana University; BSA, Purdue University; MPA, Indiana University

HUMPHREY, KATHY, Assistant Professor in Nursing, Muncie; ASN, Anderson University; BSN, Ball State University

HUNT, JILL, Instructor in Nursing, New Castle; BSN, Indiana University Northwest

HYATT, ANDREA, Assistant Professor in Academic Skills, Marion; BS, MA, Ball State University

JOHNSON, ROSE, Assistant Professor in Nursing, Program Chair, Marion; BS, Indiana Wesleyan; MS, Ball State University

JOHNSON, TONIA, Assistant Professor in Nursing, Anderson; ASN, BSN, Indiana University East

JONES, PATRICK, Professor in Manufacturing and Industrial Technology, Program Chair, Muncie; AAS, Ivy Tech State College; BS, Taylor University; MS, Ball State University; PhD, Cappella University

KELLER, TERESA G., Associate Professor in Business Administration, Anderson; BS, MAE, Ball State University

KERR, MARILYN K., Associate Professor in Business Administration, Program Chair, Anderson; BS, MBA, Ball State University

KLEEBERG, MICHAEL, Assistant Professor in Liberal Arts and Sciences, English/Communications, Anderson; BA, Kean College of New Jersey; MA, Ball State University

LANG, KAREN, Instructor in Liberal Arts and Sciences, Program Chair for Humanities, Muncie; BA, MD, JD, University of Cincinnati

MACAULEY, TERESA, Assistant Professor in Dental Assisting, Program Chair, Anderson; CDA, BS, Indiana University

MAYS, MARK, Assistant Professor in Academic Skills, Muncie; BA, Ball State University

MCDANIEL, KATHLEEN, Assistant Professor in Medical Assisting, Anderson; BA, Loyola University; MA, Ball State University

MELHAN, LYNNEA, Instructor in Medical Assisting, Muncie; AS, BS, MS, Ball State University

MOORE, MICHELLE, Assistant Professor in Liberal Arts and Sciences, Anatomy & Physiology, Muncie; BS, MS, Indiana University

MOORHEAD, PHIL, Associate Professor in Computer Information Systems/Technology, Marion; BS, Bowling Green University; MS, University of Dayton

MUNSELL, SUSANNA, Instructor in Medical Assisting, Marion; BA, Indiana Wesleyan

NELSON, SUSAN, Assistant Professor in Nursing, Department Chair, Anderson; BSN, Anderson University; MSN, Ball State University

OUTLAND, DAN K., Assistant Professor in Business Administration, Marion; BBA, Memphis State University; MBA, Ball State University

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REEDER, EMILY, Assistant Professor in Human Services, Program Chair, Muncie; BA, Anderson University; MSW, Indiana University

REESE, LORRAINE, Assistant Professor in Liberal Arts and Sciences, Anatomy & Physiology, Muncie; BS, MA, Ball State University

RICHWINE, LISA, Assistant Professor in Nursing, Anderson; BSN, Ball State University

ROBBINS, MARK, Instructor in Liberal Arts and Sciences, Anatomy & Physiology, Marion; BS, MA, Ball State University

ROBERTS, BARBARA, Assistant Professor in Medical Assisting, Muncie; BA, Anderson University; MS, St. Francis College

ROSALES, KAREN, Assistant Professor in Early Childhood Education, Anderson/Marion; BS, University of North Texas; ME, Texas Tech University

RONALD, KAREN, Assistant Professor in Nursing, Muncie; ASN, BSN, Indiana University; MSN, Ball State University

SAXON, HERBERT, Instructor in Liberal Arts and Sciences, Anatomy & Physiology, Anderson; BS, MS, PH.D, Ball State University

SCHULZ, NEILSEN, Associate Professor in Medical Assisting, Program Chair, Anderson; BS, MA, Ball State University

SCOTT, JEFFREY, Assistant Professor in Public and Social Services, Acting Chair of the School of Public and Social Services and School of Education, Muncie; BS, Ball State University; MSW, Indiana University

SEXTON, STEVE, Assistant Professor in Automotive Technology, Program Chair, Muncie; BS, Indiana University

SHAFER, MARSANN, Assistant Professor in Nursing, Anderson; BSN, Anderson University

SHEPHERD, TAMARA, Assistant Professor in Radiological Technology, Marion; AAS, BS, Ball State University

SHONK, CORA, Assistant Professor in Nursing, Muncie; BSN, MSN, Indiana Wesleyan

SMEDINGHOFF, JOHN, Assistant Professor in Computer Information Systems/Technology, Anderson; BS, University of Dayton; MS, Armour College

SMITH, SEAN C., Assistant Professor in Liberal Arts and Sciences, Program Chair for English/Communications, Muncie; BA, MAE, Ball State University

STRYFFELER, RYAN, Instructor in Liberal Arts and Sciences, English, Marion; BA, Hillsdale College; MA, University of Arizona

SWAIN, RICHARD, Associate Professor in Liberal Arts and Sciences, Mathematics, Anderson; BS, Ball State University, MS, Miami University

SYLVERSON, JULIA, Associate Professor in Nursing, Program Chair, New Castle/Anderson; AD, Anderson University; BSN Indiana Wesleyan University; MSN, University of Phoenix

SZAKALY, MICHAEL, Associate Professor in School of Business, Chair, Muncie; BS, MA, EdD, Ball State University

THORNBURG, NANCY, Instructor in Surgical Technology, Muncie; Diploma, BMH School of Surgical Technology; AAS, Ivy Tech State College

TRENNEPOHL, LORI, Instructor in Nursing, Anderson; BSN, Indiana University East

VENESKEY, KEVIN, Instructor in Accounting, Program Chair, Muncie; BA, Anderson University; MPA, Kelly School of Business

VESPERRY, PAUL, Assistant Professor in Manufacturing Technology, Program Chair, Muncie; AA, Clark State University; BS, Ohio State University; MAE, Ball State University

WECHSLER, LEA ANNA, Instructor in Nursing, Muncie; ASN, Palm Beach Community College, BSN, MSN, Indiana Wesleyan

WEDGEWORTH, MICHAEL, Assistant Professor in Liberal Arts and Sciences, Mathematics, Muncie; BS, MS, Ball State University

WILLADSEN, KRISTIN, Assistant Professor in Paralegal Studies, Program Chair, Muncie; BA, JD, University of North Dakota

WILLY, BONNIE, Assistant Professor in Computer Information Systems/Technology, Muncie; BS, MAE, Ball State University

WILKERSON, JOYCE, Associate Professor in Technology, Chair of the School of Technology and School of Applied Sciences, Muncie; BS, Martin University; AS, Ivy Tech Community College; MS, Indiana State; PhD, Tennessee State

WISE, MARK, Assistant Professor in Physical Therapy Assistant, Program Chair, Muncie; BS, Bowling Green University; MA, Ball State University

WOODWARD, CATHERINE, Associate Professor in Health Sciences, Chair, Muncie; BSN, Ball State University, MSN, Indiana Wesleyan

REGION 7

PITTMAN, JEFF, Chancellor; BS, Western Kentucky University; BS, Indiana University; MS, Indiana State University; PhD, Indiana University

KING, DEANNA L., Dean of Academic Affairs; BS, Indiana University; MBA, PhD, Indiana State University

ALLMAN, LEAH, Dean of Student Affairs, Terre Haute; BS, MS, Indiana State University

FACULTY

ABBITT, JERRY, Associate Professor in Computer Information Systems, Terre Haute; BS, MS, Indiana University

ALSMAN, CATHY, Associate Professor in Human Services, Program Chair, Terre Haute; BS, MS, Indiana State University

ARCHER, JAMES, Assistant Professor in Criminal Justice, Terre Haute; BS, MS, Indiana University

ARNEY, DON, Professor, Division Chair, Terre Haute; BS, MS, Indiana State University

AUMAN, BARBARA, Faculty Fellow Instructor in Office Administration, Terre Haute; BS, Saint Mary of the Woods College; MS, Oakland City University

BERRISFORD, RICK, Assistant Professor in Welding, Terre Haute; BS, Indiana State University

BLANC, TRACEY, Assistant Instructor in Nursing, Terre Haute; AS, BS, Indiana State University

BOESEN, MELANIE, Associate Professor in Office Administration, Program Chair, Terre Haute; BS, MS, Indiana State University

BOLINGER, BONNIE, Professor in Business Administration, Program Chair, Terre Haute; BS, MBA, Indiana State University; PhD, Indiana State University

BOYER, BRENDA, Instructor in Nursing, Terre Haute; AS, BS, Indiana State University

BRINSON, JAMES, Assistant Professor in Science, Terre Haute; BA, MS, Indiana State University

BROUGHTON, BARBARA, Faculty Fellow Instructor in Math, Terre Haute; BS, MS, Queens University

BROWNING, AMY, Assistant Professor in Accounting, Program Chair, Terre Haute; BS, Indiana State University; MBA, Ball State University

CANNON, EMILY, Instructor in Nursing, Terre Haute; AA, Vincennes University; BS, MS, Indiana Wesleyan University

CHAN, ISABELLE, Instructor in Electronics, Terre Haute; MS, Ball State University

CHANEY, MARY, Associate Professor in Visual Communications, Program Chair, Terre Haute; BA, St. Mary of the Woods; MS, Indiana State University

CLEM, WARREN, Assistant Professor in Business Administration, Terre Haute; BS, Indiana State University; MBA, Indiana Wesleyan University

COFFEY, LYNETTE, Instructor in Nursing, Terre Haute; ASN, Vincennes University; BS, Indiana Wesleyan University

COLE, CATHY, Instructor in Elementary Education, Terre Haute; BA, Muskingum College; MS, Marygrove College

COOPER, KIM, Assistant Professor in Practical Nursing, Program Chair, Terre Haute; BS, AS, Indiana State University, MS, Indiana State University

COX, PHYLLIS, Assistant Professor in General Education, Terre Haute; BS, MA, Indiana State University

CREED, SHERRA, Instructor in Surgical Technology, Terre Haute; AS, BS, Indiana State University

DAVIDSON, MARY, Instructor in Nursing, Terre Haute; BS, Indiana Wesleyan University

DAVIS, MICHAEL, Assistant Instructor in Automotive Services, Terre Haute; AAS, Ivy Tech State College

DIEL, MARY, Assistant Instructor in Radiology, Terre Haute; AS, Ivy Tech Community College

EICHHORST, BARBARA, Instructor in Medical Laboratory Technology, Terre Haute; BS, MS, Indiana State University

FIELDS, VICTOR, Assistant Professor, Site Manager, Terre Haute; BS, Indiana State University; MS, Indiana University

GAMBILL, JANEE, Associate Professor in Medical Laboratory Technology, Program Chair, Terre Haute; BS, MS, Indiana State University

GARNER, JOHN, Assistant Professor in Radiology, Program Chair, Terre Haute; BS, Indiana State University

GOOD, ANSON, Assistant Professor in Automotive Technology, Terre Haute BS, MS, Indiana State University

GOODE, RENA, Associate Professor in Medical Laboratory Technology, Terre Haute; BA, Greenville College

GOPALAN, SUJATA, Assistant Professor in Biotechnology, Program Chair, Terre Haute; BFA, MFA, Louisiana State University and A&M

GOSNELL, KELLY, Associate Professor in Practical Nursing, Terre Haute; AS, BSN, Indiana State University, MS, University of Southern Indiana

GRABLE, HEATHER, Instructor in Respiratory Care and Clinical Education Director, Terre Haute; AAS, Ivy Tech State College

GRAHAM, JEANNE, Professor in Liberal Arts, Program Chair, Terre Haute; BS, Indiana University; MA, Indiana State University

GREENWELL, WILLIAM, Assistant Professor in Human Services, Terre Haute; BA, MA, University of Mississippi

HARMLESS, MALCOLM, Assistant Professor in Electronics, Program Chair, Terre Haute; AAS, Ivy Tech State College; BS, MS, Indiana State University

HART, MYRA, Instructor in Nursing, Terre Haute; BS, Indiana Wesleyan University

HELDERMAN, MICHELLE, Instructor in Practical Nursing, Terre Haute; BS, University of Evansville

HENSON, JOSEPH, Assistant Professor in Math, AS Lake Land College; AAS, Ivy Tech State College; BS, Purdue University

HOFMANN, BEULAH, Associate Professor in Practical Nursing, Program Chair, Greencastle; BSN, MS, Indiana State University

JONES, CHARLES, Assistant Instructor in Manufacturing and Industrial Technology, Terre Haute; AAS, Ivy Tech State College; BS, Indiana State University

JONES, CHERYL, Assistant Professor in Early Childhood Education, Program Chair, Terre Haute; AAS, BS, MS, Indiana State University

JONES, SUSAN, Faculty Fellow in Medical Assisting, Terre Haute; BS, Indiana State University

KIRBY, BRYAN, Assistant Professor in General Education, Terre Haute; BA, Olivet Nazarene University; MA, Indiana State University

LAWSON, JAMES, Assistant Professor in Manufacturing and Industrial Technology, Terre Haute; BS, Indiana State University

LIGGET, LUCINDA, Assistant Professor in Liberal Arts and English, Terre Haute; AS, Vincennes University; BS, MA, Indiana State University

LONG, JOE, Assistant Instructor in HVAC, Terre Haute; TC, Ivy Tech State College

LUMSDON, DONALD R., Assistant Professor in Automotive Technology, Program Chair, Terre Haute; BS, Indiana State University

MAHER, ELIZABETH, Assistant Professor in Life Sciences, Terre Haute; BS, St. Mary of the Woods; MS, Indiana State University

MARTIN, DENA, Instructor in Criminal Justice, Program Chair, Terre Haute; BA, JD, Indiana University

MASSA, LILA, Instructor in Math, Terre Haute; BS, MS, Indiana State University

MCCAMMON, CARRIE, Associate Professor in Math, Program Chair, Terre Haute; BS, MS, Indiana State University

MILNER, ELAINA, Instructor in General Education, Terre Haute; BS, Indiana State University

MOUNCE, TERRA, Instructor in Practical Nursing, Greencastle; AS, BS, Indiana State University

MURRAY, ROBERT, Associate Professor in Computer Information Systems, Program Chair, Terre Haute; BA, MS, Butler University

NICOSON, BERRY, Instructor in Paramedic Science, Program Chair, Terre Haute; AAS, Ivy Tech State College

OPELL, TOMMIE, Instructor in Practical Nursing, Terre Haute; BS, Indiana Wesleyan University

OSTER, SYLVIA, Instructor in Science, Greencastle; BA, University of Kansas; PhD, Northwestern University

PAGE, KAREN, Assistant Professor in Visual Communications, Terre Haute; BS, Hardin-Simmons University; MS, Indiana State University

PEEBLES, CHARLES, Assistant Instructor in Electronics, Computer Information Systems, Terre Haute; AAS, Ivy Tech State College; BS, Capella University

PURDUE-REECE, JENNIFER, Associate Professor in Respiratory Care, Program Chair, Terre Haute; ART, BS, Indiana University; ASN, Excelsior College; MS, Ball State University

RASLEY, JAMES, Assistant Professor in Computer Information Systems, Terre Haute; AAS, Ivy Tech State College; BS, Pacific Western University

RONG, JIANREN, Assistant Professor in Design, Program Chair, Terre Haute; BSAE, Tianjin Institute of Technology; MS, Rose-Hulman Institute of Technology; MBA, Lancaster University

SCHONBERGER, BECKY, Assistant Professor in Medical Assisting, Program Chair, Terre Haute; BS, Indiana State University; BS, University of Evansville

SCHROEDER, KENNETH, Assistant Professor in Computer Information Systems, Terre Haute; BS, Indiana State University; MBA, Indiana Wesleyan

SCHWENK, TERRI, Instructor in Practical Nursing, Terre Haute; AS, Vincennes University; BSN, Indiana Wesleyan University

SCOTT, STACEY, Instructor in Medical Assisting, Terre Haute; ASN, BSN, Indiana State University

SHOTWELL, ROBERT, Associate Professor in Science, Division Chair, Terre Haute; BS, Rose-Hulman Institute of Technology; MS, Indiana State University

SISCOE, DONOVAN, Assistant Instructor in Welding and Machine Trades, Terre Haute; AAS, Ivy Tech State College

SLYH, KATHLEEN, Associate Professor in AS Nursing, Terre Haute BSN, University of Cincinnati; MS, Indiana State University

STULTZ, LESLIE, Associate Professor in General Education, Division Chair, Terre Haute; BS, MS, Indiana State University; PhD, Indiana State University

SUTTON, MARY, Instructor in Radiology Technology and Clinical Coordinator, Terre Haute; AAS, Ivy Tech State College

SWANK, DENISE, Assistant Professor in Radiology Technology, Terre Haute; AAS, Ivy Tech State College; BS, St. Mary of the Woods

THOMAS, PATRICIA, Assistant Professor in Math, Terre Haute; MLS, Indiana State University; MS, Indiana State University

TROUT-SWALLS, JANET, Associate Professor in Business Administration, Division Chair, Terre Haute; BS, Indiana State University; MBA, Indiana Wesleyan University

VOGEL, LOIS, Instructor in Nursing, Terre Haute; BS, Indiana Wesleyan University; MS, Indiana State University

WAGNER, GARY, Assistant Professor in Accounting, Division Chair, Terre Haute; BA, St. Meinrad College; MBA, Indiana University

WEBSTER, JANICE, Associate Professor in Science, Program Chair, Terre Haute BS, MS, Indiana State University

WEUST, JAN, Assistant Professor in Practical Nursing, Terre Haute; AS, Indiana State University; BS, MS, Indiana Wesleyan University

WILL, JULIE, Assistant Professor in Nursing, Division Chair, Terre Haute; BS, MS, Indiana State University

WILSON, DEBRA, Assistant Professor in Surgical Technology, Program Chair, Terre Haute; BS, MS, Indiana Wesleyan University

WISBEY, LOUISE, Assistant Professor in Radiology, Program Chair, Terre Haute; AS, University of Evansville; BS, IUPUI School of Medicine

REGION 8

DUNN, HANK, Chancellor; AA, Indiana River Community College; BA, University of Florida; MEd, Florida Atlantic University; EdD, University of Florida

LEE, KATHLEEN, Dean of Academic Affairs, Indianapolis; AS, MS, Indiana University; BS, Muskingum College; EdD, Ball State University

FACULTY

ALFREY, DUANE C., Assistant Professor in Manufacturing and Industrial Technology, Indianapolis; AAS, Ivy Tech State College; BS, Columbia State University

ALTMAN, SUSAN, Assistant Professor in Paralegal, Program Chair, Indianapolis; BA, MA, Eastern Kentucky University; JD, University of Louisville

ANDERSON, LANA, Assistant Professor in Medical Assisting, Indianapolis; BA, University of Massachusetts; MA Ball State University

ANDREWS, LORI, Assistant Professor in Medical Assisting, Program Chair, Indianapolis; AS, BS, MS, Indiana University

ARNETT, MARILYN B., Assistant Professor in Human Services, Indianapolis; MSW, LCSW

ATKINS, MARK, Assistant Professor in Electronic and Computer Technology, Indianapolis; BS, MS, Purdue University

AULL, ANN G., Associate Professor in Early Childhood Education, Program Chair, Indianapolis; BS, Indiana University; M Ed, Indiana State University

BALSLEY, DEWY, Assistant Professor in Social Sciences, Program Chair, Indianapolis; BGS, Indiana University; MA, Ball State University

BANNOURAH, HAYA, Instructor in Radiologic Technology, Indianapolis; AAS, Ivy Tech Community College

BARNES, JOHN BRADEN, Assistant Professor in Design Technology, Indianapolis; MS, Purdue University

BAUMER, MARGARET A., Assistant Professor in Office Administration, Indianapolis; AS, Miami Jacobs College of Business; BS, University of Cincinnati; MS, Indiana University

BECKER, LANA, Assistant Professor in Communication, Indianapolis; BA, West Chester University; MA, Regent University

BENNETT, JANET, Assistant Professor in Human Services, Indianapolis; BSW, MA, Ball State University

BILBREY, REBECCA, Instructor in Visual Communications, Indianapolis; BFA, Herron School of Art

BIZUNEH, MOGES, Indianapolis; BS, Haile Sallassie University; MS, Cornell University; PhD, Indiana University

BONE, SHARON, Associate Professor in Academic Advancement, Division Chair, Indianapolis; BS, Ball State University; MS, Butler University

BOWLING, CHARITY, Instructor in Respiratory Care, Indianapolis; BS, Indiana Wesleyan University

BRICKER, JEFF, Instructor in Hospitality Administration, Program Chair, Indianapolis; AAS, Ivy Tech State College; BS, Indiana Wesleyan University; Certified Executive Chef; MA, Ball State University

BROOKS, JOHN, Assistant Professor, Indianapolis; BA, Morgan State University; MSM, Indiana Wesleyan University; JD, Indiana University

BROWN, MARY, Associate Professor in Practical Nursing, Indianapolis; BSN, MSEd, Indiana State University

BUZASH, VICTORIA A., Assistant Professor in Academic Advancement English, Indianapolis; BS, Ball State University; MA, Ball State University

CAMPBELL, BRENDA R., Assistant Professor in Academic Advancement ASA English, Indianapolis; BA, University of North Florida; MA, Georgetown College

CARTER, JOE, Instructor in Criminal Justice, Indianapolis; BSE, Delta State University; MPA, Jacksonville State University

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CARVER, STEVE, Instructor in Computer Information Systems, Indianapolis; AS, Purdue University; BA, Indiana University; MS, IUPUI

CHATTERJEE, SHIKA, Assistant Professor in Practical Nursing, Indianapolis; BSN, MSN, Delhi University

CINKOSKE, BERNADETTE, Assistant Professor in Computer Information Systems, Indianapolis; BA, Indiana University

CLARKSON, CHERYL, Assistant Professor in Practical Nursing, Indianapolis; BSN, Indiana University; MSN, Ball State University

COLEMAN, BRY, Instructor in Surgical Technology, Program Chair, Indianapolis; TC, Community College of the Air Force

COMSTOCK, ERIC, Assistant Professor in Human Services, Program Chair, Indianapolis; BA, Michigan State University; MA, John F. Kennedy University

DALZELL, JANE, Assistant Professor in Liberal Arts and Sciences, General Studies, Program Chair, Indianapolis; BA, University of Indianapolis; MS, Butler University

DAUGHERTY, MARVIN L., Associate Professor in Computer Information Systems, Program Chair, Indianapolis; AAS, Ivy Tech State College; BS, Martin University, MS, Indiana State University

DICKMANN, PATRICIA, Assistant Professor in Early Childhood Education, Indianapolis; BS, Purdue University; MS, Nova University

DUNCAN, BARBARA, Assistant Professor in Nursing, Indianapolis; BSN, Seton Hall University; MSN, Old Dominion University

DUNCAN, JAMES, C., Associate Professor in Communications, Program Chair, Indianapolis; BS, Oakland City College; MDiv, Drew University; AM, DePauw University; EdD, Nova Southeastern University

DUNKLE, BOB, Assistant Professor in Social Sciences, Indianapolis; BA, Parson College; MS, Purdue University; PhD, Purdue University

ENGLAND, THOMAS, Instructor in Hospitality Administration, Indianapolis; BA, University of Evansville

EPPS, ELISHA, Assistant Professor in Nursing, Indianapolis; BSN, St Joseph College

EVANS, JAMES, Assistant Professor in Anatomy and Physiology, Indianapolis; BS, MS, Indiana State University

FAULK, TIMOTHY E., Assistant Professor in Public Safety, Indianapolis; AS, Indiana University; BS, University of New York

FERGUSON, CHRISTOPHER, Instructor in Automotive Technology, Indianapolis; AAS, Ivy Tech State College; BS, Indiana State University

FINNEY, RONALD DEAN, Assistant Professor in Automotive Technology, Program Chair, Indianapolis; AAS, Ivy Tech State College; BS, Indiana University

FLANIGAN, WILLIAM T., Associate Professor in Manufacturing and Industrial Technology, Program Chair, Indianapolis; BS, Tri-State University; MS, Indiana Wesleyan University

FLICK, DANIEL, Instructor in Machine Tool Technology, Indianapolis; BA, Indiana University

FLUHARTY, LINDA KAY, Associate Professor in Nursing, Indianapolis; BSN, University of Evansville; MSN, IUPUI

FOWLER, LUSTER, Associate Professor in Health Sciences, Division Chair, Indianapolis; BS, Indiana Wesleyan University; MBA, Indiana Wesleyan University

FOX, ALISA, Assistant Professor in Fine Arts, Indianapolis; BFA, Herron School of Art; BA Nebraska Wesleyan; MS, Indiana University

FOX, MELINDA, Full Professor in General Education, Indianapolis; BS, MS, Indiana State University

GASSNER, CONNIE, Assistant Professor in Early Childhood Education, Indianapolis; BS, University of Maine; MS, Indiana University

GORSLINE, MICHAEL D., Professor in Mathematics, Indianapolis; BA, Indiana University; MA, Ball State University

DEBOURBON, MICHAEL W., Associate Professor in Design Technology, Division Chair, Indianapolis; BS, Southern Illinois University; MS, Indiana University

GRAY, HARRY E., Assistant Professor in Accounting, Program Chair, Indianapolis; BS, Butler University; CPA

GRIFFIN, LAURENE, Instructor in Hospitality Administration, Indianapolis; AAS, Ivy Tech State College; BS, Indiana Wesleyan University; Certified Executive Chef

HACKER, LORIE, Assistant Professor in Nursing, Indianapolis; BSN, University of Indianapolis; MSN, Indiana Wesleyan

HALL, MICHAEL C., Associate Professor in Computer Information Systems, Indianapolis; ABD, Indiana State University; BS, MS, Purdue University

HAMILTON, MARILYN S., Professor in Academic Advancement Mathematics, Indianapolis; BS, Purdue University; MS, Butler University

HARDING, DERRICK W., Assistant Professor in Academic Advancement English, Indianapolis; BA, College of Wooster; MA, Indiana University

HARDY, MELANIE, Instructor in Nursing, Indianapolis; BSN, Indiana Wesleyan University, MSN, Walden University

HAYES, AMY, Assistant Professor in Nursing, Indianapolis; BSN, Indiana University; MSN, University of Phoenix

HEINY, ANN C., Instructor in Academic Advancement Life Sills, Indianapolis; BS, Manchester College; MS, Indiana State University

HICKS, CARMEN WEAVER, Assistant Professor in Social Sciences, Indianapolis; BA, University of Cincinnati; MA, Clark-Atlanta University; PhD, University of Maryland

HILTON, KIMBERLY A., Assistant Professor in Academic Advancement, Indianapolis; BA, University of Indianapolis; MS, Indiana University

HOLLENBERG-CUSSEN, KRISTA, Assistant Professor in Paralegal, Indianapolis; BA, Manchester College; MA, JD, Indiana University

HOLLOWELL, RONALD L., Professor in Academic Advancement English, Indianapolis; BS, University of Indianapolis; MA, Ed.D, Indiana University

HOLZINGER, BRENDA, Assistant Professor in Health Information Systems, Program Chair, Indianapolis; BHA, Indiana University; MSM, Indiana Wesleyan

HOPKINS, JYLL, Assistant Professor in Nursing, Indianapolis; BSN, Indiana University

HOSKINS, LARRY E., Assistant Professor in Public Safety, Program Chair, Indianapolis; AAS, Ivy Tech State College; BS, Southern Illinois University

HUETTL, KEITH, Instructor in Automotive Technology, Indianapolis; AAS, Ivy Tech State College; BS, Ferris State University

IRWIN, JAMES, W., Assistant Professor in Manufacturing and Industrial Technology, Indianapolis; AAS, Ivy Tech State College; BS, Martin University, MS, Oakland University

JABLONSKI-POLK, TERESA, Associate Professor in Health Sciences and Public Services, Division Chair, Indianapolis; BA, University of Kentucky; MSW, Washington University

JONES, KENNETH, Instructor in Business Education, Indianapolis; MBA, Indiana University

KECK, ROBERT JOE, Professor in Human Biology, Indianapolis; BS, University of Southern Indiana; MS, Indiana State University; MS, College of St. Francis

KOLLER, ANGLA M., Assistant Professor in Practical Nursing, Indianapolis; BSN, Purdue University; MSN, University of Phoenix

KUBIK, CHRIS, Assistant Professor, Indianapolis; MBA, University of Detroit

LAFOUREST, JUDITH, Assistant Professor in English, Indianapolis; MBA, University of Detroit

LEIGH, GREGORY, Assistant Professor in Computer Information Systems, Indianapolis; BS, MS, Indiana University

LESURE, JENNIFER, Instructor in Accounting, Indianapolis; MBA, Indiana Wesleyan University

LEVERETTE, DEBRA, Assistant Professor in Office Administration, Indianapolis; BS, Ball State University; MS, Indiana University

LEWIS, WILLIAM ALAN, Assistant Professor in Visual Communication, Indiana; BS, MS, Indiana University

LUX, ANDREA, Assistant Professor in Nursing, Indianapolis; BSN, University of Indianapolis

MAGERS, AMBER, Instructor in Respiratory Care, Indianapolis; AAS, Ivy Tech State College; BS, Indiana University

MAGNANT, PETER T., Associate Professor in Health Sciences and Public Services, Indianapolis; AA, BS, Indiana University; BA, St. Mary's College; MS, EdD, Indiana University

MAGNUSON, MARK, Associate Professor in Liberal Arts and Sciences and General Education, Division Chair, Indianapolis; BA, Bed, Med, University of Saskatchewan; PhD, University of North Dakota

MANNAN, SUSAN, Library Technical Assistant Program Chair, Indianapolis; BA, Heidelberg College; MA, Indiana University; PhD, Indiana State University

MEADOWS, CHRIS, Instructor in Automotive Technology, Indianapolis; AS, BA, Indiana University

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MILLER, BRIAN, Program Chair, Mortuary Science, Indianapolis; AAS, BS, Cincinnati College of Mortuary Science; MS, Ball State University

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MILLINER, SEAN, Instructor in Computer Information Systems, Indianapolis; BA, Glenville State College; MS Cappella University

MILLS, TRACY, Instructor in Biotechnology, Indianapolis; BS, MS, Tennessee Tech University

MOMAN, FRANKIE L., Associate Professor in Business Administration, Division Chair, Indianapolis; BS, Murray State University; MS, Oakland City University; PhD, Indiana State University

MUNDT, JAMES D., Instructor in Academic Advancement Mathematics, Indianapolis; AB, Hanover College; JD, Indiana University

MURPHY, TODD, Assistant Professor in Biotechnology, Program Chair, Indianapolis; BS, MS, University of Kentucky

NETTERVILLE, ELVIS E., Assistant Professor in Academic Advancement Mathematics, Indianapolis; BS, IUPUI; BA, Indiana University; MPA, IUPUI

NICHOLSON, RODNEY, Instructor, Indianapolis; AS, Vincennes University

NOE, J. STEPHEN, Instructor in Anatomy and Physiology, Indianapolis; BS, University of Notre Dame; MS, Illinois State University

OSMUNDSON, DAN, Associate Professor in Visual Communications, Program Chair, Indianapolis; BA, Saint Olaf College; MFA, University of Wisconsin

PAROSKI, SUSAN, Assistant Professor in Radiology, Indianapolis; BS, Indiana University; MA, Ball State University

PEREZ, JOHN, Assistant Professor in Visual Communications, Indianapolis; BS, Ball State University; MS, Indiana University

PIERCE, DEBRA, Associate Professor in Early Childhood Education, Indianapolis; BA, North Park University; Med. Nova University

PREER, JAMES C., Associate Professor in Science, Indianapolis; BA, Swarthmore College; BS, Columbia University; PhD, California Institute of Technology

RAMSEY, SUSAN B., Associate Professor in Academic Advancement, English, Indianapolis; BS, MS, Indiana University

REKLAU, MARYANN A., Associate Professor in Nursing, Indianapolis; ASN, Staten Island Community College; BSN, MSN, Indiana University

RIEGER, JEANNE, Instructor in Surgical Technology, Indianapolis

RICE, MARY KATHLEEN, Associate Professor in Academic Advancement English, Indianapolis; BA, MS, Indiana University Purdue University at Indianapolis

RIFKIN, LORENE, Assistant Professor in Nursing, Indianapolis; BSN, University of North Carolina, MSN, Ball State University

RIGGIN, ELAINE, Instructor in Nursing, Indianapolis; AS, BS, Marian College; BS, Indiana University; MBA, Indiana Wesleyan University

RIGSBY, LAURA, Nursing, Indianapolis; BSN, Indiana University; MSN, Anderson University

RUBENSTEIN, ALBERT, Assistant Professor in Science, Indianapolis; BS, MS, Memphis State University; PhD, University of Tennessee

RULE, S. RENEE, Assistant Professor in English, Indianapolis; BA, Indiana University; MFA, Goddard College

RUSSELL, LARRY, Assistant Professor in English, Indianapolis; BS, MS, Indiana State University

RUSU, LUCIA, Professor in Science, Program Chair, Indianapolis; BS, Babes-Bolyai University; MS, Purdue University

SCHOWE, EDWIN, Instructor in Chemistry, Indianapolis; BA, MS, Purdue University; MA, Ball State University

SCHUCK, CAROL, Assistant Professor in English, Program Chair, Indianapolis; BS, Ball State University; MA, Butler University

SEDAM, STACY, Assistant Professor in Nursing, Indianapolis; BSN, St. Francis College

SENSENBRENNER, OWEN L., Assistant Professor in Manufacturing and Industrial Technology, Indianapolis; BS, MS, Indiana State University

SHARON, STEPHEN, Assistant Professor in Manufacturing and Industrial Technology, Indianapolis; BS, Purdue University; MS, Iowa State University

SHIRZADI, SIMIN, Assistant Professor in Social Sciences, Indianapolis; BA, MA, EdS, Western Michigan University; EdD, Nova Southeastern University

SISEL, ANN, Associate Professor in Radiologic Technology, Program Chair, Indianapolis; BS, Marian College-Fond du Lac, Wisconsin; MS, Indiana University

SMITH, ALLEN N., Assistant Professor in Social Sciences, Indianapolis; AB, Hope College; AM, University of Michigan; JD, Indiana University

SMITH, DIANE, Assistant Professor in Early Childhood Education, Indianapolis; BS, Ohio State University; MS, Georgetown College

SPEAR, MARIA, Instructor in English, Indianapolis; BA, Marian College; MS, Indiana University

STONE, DIANE, Assistant Professor in Business Administration, Indianapolis; BS, MS, Indiana Wesleyan; MA, University of Indianapolis

STOWE, MARCUS D., Associate Professor in Respiratory Care, Program Chair, Indianapolis; AS, Indiana University; BS, St. Francis University; MS, Indiana University

SUMMERS, DEBORAH, Assistant Professor in Nursing, Indianapolis; BSN, Indiana University

TAYLOR, RONDA, Instructor in Business Administration, Indianapolis; BS, Purdue, MBA, University of Phoenix

TARRICONE, BONNIE, Assistant Professor in Anatomy and Physiology, Indianapolis; BA, Wheaton College; MA, The William Paterson College of New Jersey; PhD, Indiana University

TEEGUARDEN, JANET, Professor in Mathematics, Indianapolis; BA, DePauw University; MS, Indiana State University; MEd., National-Louis University

TRUSTY II, RICHARD T., Associate Professor in Design Technology, Program Chair, Indianapolis; BS, Purdue University; MA, Ball State University

UPDIKE, BARTON, Assistant Professor in Social Science, Indianapolis; AB, Hanover College; MDiv, Yale University

VIDA, PAUL, Instructor in Hospitality Administration, Indianapolis; AA, Dramatic-Arts, San Diego; AOS, Culinary Institute of American

WACEK, VICTORIA, Associate Professor in Mathematics, Program Chair; BS, Mapua Institute of Technology; MS, University of New Hampshire; EdD, University of Missouri-Columbia

WARD, JUDY, Instructor in Medical Assisting, Indianapolis; BS, Ball State University

WARNER, LAURA, Assistant Professor in Practical Nursing, Indianapolis; BSN, Oakland University, MSN, University of Phoenix

WHITFIELD, WILLIE, Associate Professor in Criminal Justice, Program Chair, Indianapolis; BA, MS, Alabama A & M University

WILSON, CYNTHIA, Assistant Professor in Nursing, Indianapolis; BSN, Indiana University

WILSON, MICHAEL, Assistant Professor in English, Indianapolis; BS, California University of Pennsylvania; MA, Ball State University

WILSON, ROSE, Instructor in Early Childhood Education, Indianapolis; BS, MEd, California University of Pennsylvania

WURTZ, ROBERT L., Assistant Professor in Design Technology, Indianapolis; AS, BS, Purdue University; MS, Indiana State University

YANCEY, MERRILL, Assistant Professor in Business Administration, Indianapolis; BS, MA, Oakland City University

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REGION 9

STECK, JAMES, Chancellor; BS, MS, Ohio State University

TINCHER, STEVEN, Dean of Academic Affairs; BS, MA, Ball State University; PhD, Regent University

PENNINGTON, SABRINA, Dean of Student Affairs; BA, University of Indianapolis; MS, Ball State University

FACULTY

ANDERSON, JILLENE K., Professor in Health Sciences, Division Chair; BS, Indiana Wesleyan University; MS, Ball State University, RN

AYTON, EUGENE G., Assistant Professor in Business Administration, Program Chair; BS, Morgan State University; MA, Ball State University

BECHTEL, BARBARA E., Assistant Professor in Nursing; BSN, Indiana University; MSN, University of Southern Indiana; RN

BLAKELY, CURTIS, Assistant Professor in Computer Information Systems and Computer Information Technology, Department Chair; AS, BS, Indiana University; MBA, Jones International University

BRUSTKERN, MAUREEN E., Professor in Education Department, Department Chair; BS, Ohio State University; MS, Wright State University; PhD, University of Dayton

CAMPBELL, KATHY, Assistant Professor in Early Childhood Education; AS, Ivy Tech State College; BS, Saint Mary of the Woods; MS, University of Dayton

CLINE, GLENDA, Assistant Professor in Nursing; BSN, Indiana University; MSN, University of Southern Indiana; RN

COOK RAMONA, Assistant Professor in Construction Technology, Program Chair; AAS, Ivy Tech State College;

AA, BGS, Indiana University; MS, Indiana Wesleyan University

FERGUSON, JEANNE, Assistant Professor in Life Sciences; BS, Marian College; MA, Ball State University

FOLEY-MINKS, MELINDA, Instructor in Nursing and Medical Assisting; BS, BSN, Purdue University; RN

FRANTZ, ROBERT M., Assistant Professor in Automotive Technology, Program Chair; AAS, Ivy Tech State College; BS, Indiana Wesleyan University; ASE Master Mechanic; ASE Master Machinist

GABBARD, BILLIE JO, Assistant Professor in Nursing, Department Chair; TC, ASN, Ivy Tech State College; BSN, Indiana University; MSN, University of Phoenix; RN

GIDNEY, CHARLES, Assistant Professor in Communications; BA, Grambling State University; MA, Governors State University

GRAESSER, WILLIAM M., Professor in Mathematics, Division Chair; BA, Otterbein College; MAT, Webster University

GUARD, KIMBERLY, Instructor in Nursing; BSN, Indiana Wesleyan University; RN

JOHNSON, JASON, Instructor, Computer Information Systems and Computer Information Technology; BS, MS, Indiana Wesleyan University

KUSHNIROFF, MELINDA, Assistant Professor in Accounting, Program Chair; AAS, Miami University; BS, University of Cincinnati; MBA, Xavier University

MCCREA, DANNY, Assistant Professor in Manufacturing and Industrial Technology; AS, Midland Technical College; BS, South Carolina State University; MS, University of Cincinnati

MENNETT, MICHAEL, Assistant Professor in Mathematics; BS, Ohio State University; MS, Cleveland State University

OLER, RONALD, Associate Professor in Office Administration, Department Chair for Office Admin. and Paralegal Studies; AAS, Ivy Tech State College; BS, MS, Indiana Wesleyan University

OLSON, BRIAN, Instructor in Anatomy & Physiology and Life Sciences; BS, University of Dayton; BS, Doctor of Chiropractic, National College of Chiropractic

PHARES, VANESSA, Instructor in Nursing; ASN, Indiana University; BSN, Indiana Wesleyan University; RN; MSN, University of Phoenix

PLANKENHORN, KATHERYN, Instructor in Medical Assisting, Program Chair; TC, Ivy Tech State College; ASN, Regents College; BSN, Indiana Wesleyan University; RN

REISINGER, SARAH, Instructor/Program Chair, Academic Skills Advancement; BS, Purdue University

STOKES, JAMES, Instructor in Manufacturing and Industrial Technology, Department Chair; BA, MA, Ball State University

SWIHART, ANNA, Assistant Professor in Health Sciences; BS, Ohio University; MS, Ball State University

TERRELL, PEGGY J., Professor in Office Administration, Division Chair; BS, Indiana State University; MA, Ball State University

THALLS, TAMMY, Instructor in Nursing; BSN, Indiana University; RN

THURSTON, SHERYL L., Associate Professor in Nursing; BSN, MA, Ball State University; MSN, University of Phoenix; RN

WARD, BARBARA, Assistant Professor in Nursing; ASN, BSN, Indiana University; MSN, University of Southern Indiana; RN

WILSON, MARC L., Associate Professor in General Education; BA, MA, Ball State University

REGION 10

HOGAN, JOHN, Chancellor, Columbus; BS, MA, Western Kentucky University; PhD, Indiana State University

HINE, ROSALIE J., Dean of Academic Affairs, Columbus; BS, MS, EdD, Ball State University

BINGHAM, ROGER, Dean of Student Affairs, Columbus; BA, MA, University of Dayton

FACULTY

ADKINS-LITTRELL, MAXINE, Professor in General Education, Columbus; BA, Indiana Central College; MA, University of Indianapolis

ANDERSON, MARIBETH, Professor in General Education, Columbus; BA, Indiana University; MA, Butler Univ.; EdD, Nova Southeastern Univ.

BAKER, GENEVA, Professor in Health Sciences, Division Chair, Columbus; AAS, BSN, MSN, Indiana University

BARKER, DONA, Instructor in Nursing, Columbus; BSN, Indiana University

BREEDING, JUDY, Instructor in Nursing, Columbus; BSN, Indiana University

BRIGGS, JOYCE, Instructor in Nursing, Columbus; BSN, Elmhurst College; MSN, Xavier University

BURTON, JANET, Instructor in Nursing, Columbus; BSN, Bob Jones University; MSN, University of Alabama

CAIN, WENDY, Instructor in Anatomy and Physiology and Microbiology, Columbus; BS, Olivet Nazarene University; MS, Indiana University

CANINE, JILL, Professor in Computer Information Systems, Program Chair, Columbus; BA, Hanover College; MA Ball State University

CARTER, PAULA, Instructor in Nursing, Columbus; BSN, Indiana University; MSN, University of Phoenix

DEPAUL, LOUIS, Associate Professor in Business, Division Chair, Columbus; BS, Youngstown State University; MBA, Indiana University

DOUGHERTY, RONALD, Professor in Business Administration and Accounting, Program Chair, Columbus; BS, Indiana University; MS, Indiana Wesleyan University

GAUDIN, ANTHONY, Professor in Science, Program Chair, Columbus; BS, MS, PhD, University of Southern California

GILES, CAROLYN, Professor in General Education, Columbus; BS, MS, Indiana University

GRAUE, GREGORY, Associate Professor in General Education, Columbus; BS, MAT, Indiana University; MA, Ball State University

HAMMERSLEY, PHIL, Assistant Professor in General Education, Columbus; BA, Olivet Nazarene College; MS, Indiana University

HARDEN, TERESA, Assistant Professor in Nursing, Columbus; BSN, Indiana University

HAWKINS, KATHY, Instructor in Medical Assisting, Program Chair, Columbus; AAS, Ivy Tech State College; BS, MS, Indiana State University

HAZA, KIM, Instructor in Manufacturing and Industrial Technology, Columbus; AS, AAS, Ivy Tech State College; BS, Indiana State University

HUNTINGTON, SANDY, Instructor in Nursing, Columbus; BSN, MSN, Indiana University; MBA, Indiana Wesleyan University

JACKSON, ROBERT, Assistant Professor in Accounting, Columbus; BS, MA, Bowling Green State University

KELCEOGLU, BEKIR, Instructor in Interior Design, Program Chair, Columbus; BA, Anadolu University; MFA, Ohio State University

KEMPKE, SUZANNE, Assistant Professor in Anatomy and Physiology, Columbus; BA, MS, University of Illinois

LEWIS, ELOISE, Associate Professor in Nursing, Columbus; BA, MA, Adelphi University; MSN, University of Southern Indiana

MCNEELY, SANDRA, Instructor in Nursing, Columbus; BSN, Indiana University

MCPHERSON, KAREN, Assistant Professor in Criminal Justice, Program Chair, Columbus; BA, College of the Ozarks; MA, Lincoln University; ABD, Ohio State University

MILLER, MARCY, Associate Professor in Design Technology, Program Chair, Columbus; BS, Purdue University; MS, Indiana State University

NISSEN, DON. E., Associate Professor in Visual Communications, Program Chair, Columbus; BA, Buena Vista University; MA, University of Kansas

NOLTING, BONNIE, Professor in Office Administration, Program Chair, Columbus; BS, MS, Indiana University

NORRELL, MARY PATRICIA, Professor in Nursing, Program Chair, Columbus; BSN, Ball State University; MS, Indiana University

RAGLE, BRENDA, Assistant Professor in Early Childhood Education, Program Chair, Columbus; BA, Indiana University; MBA, Indiana Wesleyan University; ABD, Ball State University

SHEETS, SUSAN, Assistant Professor in Surgical Technology, Program Chair, Columbus; AAS, Ivy Tech State College; AS, BS, Purdue University

SIMS, CHARLES, Instructor in Paramedic Science, Program Chair, Columbus; AAS, Purdue University; BA, Indiana University

TODD, JANET, Instructor in Nursing, Columbus; BA, Indiana Wesleyan University

UPDIKE, FAWN, Instructor in Nursing, Columbus; BS, Purdue University

VINCENT, PAMELA, Instructor in Psychology, Program Chair, Columbus; BA, Tennessee Temple University; MS, University of Tennessee

WALTZ, SUSAN, Professor in Nursing, Columbus; BSN, Indiana University; MSN, Ball State University

WILSON, JONATHAN, Professor in Visual Communications, Division Chair, Columbus; BFA, San Francisco Art Institute; MFA, Indiana University

WONNING, JUDY, Assistant Professor in Nursing, Columbus; BS, Indiana University

REGION 11

HELMS, JAMES, Chancellor; BS, Hanover College; MS, EdS, Xavier University

HEIDERMAN, DON, Campus Dean/Dean of Student Affairs, Madison; BA, Indiana State University

GRAVER, MARK, Campus Dean/Associate Dean of Academic Affairs; BS, Indiana University; MS, Central Michigan University

MOORE, L. JOE, Dean of Academic Affairs; AB, PhD, Indiana University

FACULTY

ADAMS, CORA, Assistant Professor in Practical Nursing, Madison; BSN, Indiana University; MSN, Indiana Wesleyan University

BATTA, GEORGE, Assistant Professor in Electronics and Computer Technology, Lawrenceburg; BS, Rose-Hulman Institute of Technology; MS, PhD, Purdue University

CAROLUS, CATHY, Program Chair, General Education and Support Services, Lawrenceburg; BA, Connecticut College; MA, Xavier University

CARTWRIGHT, SUSAN, Assistant Professor, Computer Information Systems, Madison; BS. Indiana Wesleyan University; MS, Indiana State University

DADOSKY, PAUL, Associate Professor in Computer Information Systems, Lawrenceburg; BS University of Kentucky; MS, Xavier University

DISCH, THERESA, Medical Assisting Program Chair, Lawrenceburg; AS, Vincennes University. BS, Indiana Wesleyan

DORSEY, LAURIE E., Associate Professor in Associate of Nursing Program, Madison; BS, Ball State University; MSN, Indiana University

ERICKSON, JOHN L., Associate Professor, General Education and Support Services, Madison; BA, Indiana State University; MS University of Kentucky

GARNER, ANNABET, Program Chair, Medical Assisting, Madison; AS, Ivy Tech State College; BS, University of Southern Indiana

GEGLEIN, RICHARD E., Department Chair, Accounting and Business Administration, Madison; BA, Hanover College; MBA, Indiana Wesleyan

GONZALEZ, NICOLE, Program Chair, Liberal Arts, Lawrenceburg; BA, Siena Heights University; MA, Xavier University

GOODWIN, BETH, Associate Professor in Office Administration, Batesville; BS, Indiana University; ME, Indiana State University

GREER, RUTH A., Program Chair in General Education and Support Services, Madison; BA, University of Florida; MS, Indiana State University

HALL, TAMARA L., Assistant Professor in Associate of Nursing Program, Madison; BSN, University of Evansville; MSN, Indiana University

HELMS, REBECCA, Associate Professor of Business and Accounting, Madison; BS, University of Evansville; MS, Indiana State University

HENDERSON, KARLA, Program Chair in Education, Lawrenceburg; BA, Marian College; MEd, Xavier University; PhD, Miami University

KING, DEBBIE, BSN, Indiana Wesleyan University

KRISTOFF, STEVEN, Program Chair, General Education and Support Services, Lawrenceburg; BS, MS, PhD, Indiana University

LAUBER, CYNTHIA, Assistant Professor in Practical Nursing, Madison; BSN, Marian College; MSN, Indiana Wesleyan University

LYNN, CAROL, Instructor in Associate of Nursing; BSN, Ball State University

MARPLE, DONNA, Program Chair, General Education and Support Services, Lawrenceburg; BA, Marian College

MCKAY, SUZANNE, Assistant Professor in Nursing, Lawrenceburg; BSN, MSN, Indiana Wesleyan University

MCILVAIN, BETH, Assistant Professor, General Education and Support Services, Madison; BA, Miami University

MEADOWS-WILSON, BECKY L., Department Chair in Liberal Arts, General Education and Support Services; BA, MA, University of Louisville

MEDYNSKI, THOMAS, Assistant Professor, General Education and Support Services, Madison; BA, University of Chicago; MS, Northwestern University; MA, PhD, Indiana University

MORTON, JENNIFER, Associate Professor in Accounting and Business, Lawrenceburg; BS, Miami University; MBA, Xavier University

NICKAS, JEANETTE, Assistant Professor in Office Administration, Madison; BA, University of Illinois; MA, Ball State University

PROBST, MATTHEW, Department Chair in Accounting and Business, Lawrenceburg; BS, Indiana University; MBA, Xavier University

SANCHEZ, ELIZABETH, Professor in General Education and Support Services, Madison; BS, DePauw University; MA, Central Michigan University

SHAPINSKY, GENE A., Department Chair, Nursing, Madison; BSN, University of the State of New York; MSN, Bellarmine College; PhD, Indiana State University

SHARP, KAREN, Associate Professor in General Education and Support Services, Lawrenceburg; AA, Concordia Lutheran College; AAB, BS, MEd, Miami University of Ohio

SIMMONS, GEORGIA, Instructor in Practical Nursing, Madison; BSN, Eastern Kentucky University; MSN, University of Southern Indiana

SPYROU, ANGEL, Assistant Professor in General Education and Support Services; BS, Ball State University; MA, University of Illinois

TACKETT, GEORGE, Program Chair, Electronics and Computer Technology, Madison; AAS, Ivy Tech State College; BS, Rose Hulman

WILLIAMS, JANE, BSN, University of Cincinnati

YOWLER, HOLLACE, Associate Professor in Practical Nursing, Madison; BSN, University of Kentucky; MSN, University of Southern Indiana

REGION 12

SCHENK, DAN, Chancellor; BS, University of Southern Indiana; MBA, University of Evansville; PhD, Indiana State University

NAAS, JAMES, Dean of Academic Affairs; BS, MS, PhD, Southern Illinois University

ANDERSON, DEBORAH, Dean of Student Affairs, Evansville; BS, BA, MS, University of Kansas

BERRY, DAVID, Assistant Dean of Academic Affairs; BA, Mercer University; MA, Georgia State University

FACULTY

ADAMS, JONI, Instructor in Nursing, Evansville; BS, Western Kentucky University; MS, University of Evansville

AMSLER, JEANNE, Associate Professor in Liberal Arts, Evansville; BA, MS, MFA, Indiana State University

ARROWSMITH, HEATHER, Faculty Fellows, Evansville; BA, Marshall University; MS, University of Kentucky

AULICH, SUMMER, Associate Professor in Medical Assisting, Evansville; AAS, Ivy Tech State College; BS, MS, University of Southern Indiana

BAILEY, SANDRA C., Program Chair, Associate Professor in Business Administration, Evansville; BS, University of Southern Indiana, MBA, University of Evansville

BASS, PAMELA, Instructor in Nursing, Evansville; AS, BA, University of Evansville; MS, University of Southern Indiana

BUNNER, LANA L., Program Chair, Professor in Office Administration, Evansville; BS, MS, University of Southern Indiana

CHAPMAN, CAROLE, Assistant Professor of English, Evansville; BA, MA, University of Evansville

CLIFTON, LONNIE, Assistant Professor in Computer Information Systems and Computer Information Technology, Evansville; AS, BS, MS, Southern Illinois University; MS, University of Southern Indiana

COMBS, STEVEN B., Professor in Manufacturing and Industrial Technology, Program Chair, Evansville; BS, MS, Murray State University

COUGHLAN, S. DANETTE, Assistant Professor in Computer Information Systems and Computer Information Technology, Evansville; BS, University of Southern Mississippi; MS, Southwest Missouri State University

COZART, KELLY, Assistant Professor in Environmental Design, Program Chair, Evansville; BS, University of Illinois; MA, Indiana State University

DENTINO, MARY, Division Chair, Professor in Business, Evansville; BS, MS, University of Southern Indiana; PhD, Indiana State University

DICKMAN, DAN, Instructor in Psychology, Evansville; BS, Northern Arizona University; MA, Adams State College

DIEMER, JEANIE L., Associate Professor in Business Administration, Evansville; BS, Eastern Illinois University; MBA, University of Southern Indiana

DILLMAN, MATTHEW A., Professor in General Education, Evansville; BS, University of Southern Indiana; MS, Murray State University, MENG, University of Louisville

DURBIN, JOHN, Assistant Professor in Manufacturing and Industrial Technology, Evansville; AAS, Ivy Tech State College; BS, Franklin University

DYE, SUSAN E., Professor in Nursing, Program Chair, Evansville; BS, MS, University of Evansville

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EHLEN, MARGARET K., Professor in English, Evansville; BA, University of Illinois-Urbana; MA, Northeastern Illinois University

FRITZ, VANESSA, Assistant Instructor in Life/Physical Sciences, Evansville; BS, University of Southern Indiana

GORE, KAREN W., Professor in Business Administration, Evansville; BA, MBA, University of Evansville

GRAMMER, NANCY, Associate Professor in English, Program Chair; BA, MA, University of Evansville

GREESON, CYNTHIA B., Program Chair, Professor in Accounting , Evansville; BS, Central Michigan University, MBA, University of Southern Indiana

HARTGROVE, EARL, Assistant Professor in Building Construction Management and Construction Technology, Program Chair, Evansville; BS, North Carolina State University; MBA, University of Southern Indiana

HELLER, BILL C., Associate Professor in Mathematics, Evansville; BA, Defiance College, MS, St. Francis College

HESS, MARY, Associate Professor in Human Services, Program Chair, Evansville; BS, University of Southern Indiana; MA, Western Kentucky University

HINKLE, JULIA, Professor in Surgical Technology, Program Chair, Evansville' BS, Indiana Wesleyan University, MS, University of Evansville

HOSTETLER, JOE, Assistant Professor in Visual Communications, Evansville; BA, Purdue University; MS, Indiana University

HOWARD, MICHAEL A., Associate Professor in Physics, Evansville; BS, Murray State University, MEP, University of Virginia

JENNINGS, EDWIN H., Assistant Professor in Manufacturing Industrial Technology, Evansville; BS, Murray State University

JINDRICH, SUSAN, Associate Professor in Early Childhood Education, Evansville; AS, University of Southern Indiana; BS, Auburn University; MS, Indiana State University

JOBE, NANCY, Associate Professor in Offi ce Administration, Evansville; BS, Wayne State University, MBE, Eastern Michigan University

KATOWITZ, CAROL, Associate Professor in Early Childhood Education, Division Chair, Evansville; BS, Purdue University; BS, University of Southern Indiana; MA, University of Evansville

KIEFER, CHRISTOPHER, Assistant Professor in Criminal Justice, Program Chair, Evansville; BS, MS, Indiana State University

KINCHELOE, DONNA, Instructor in Nursing, Evansville; BSN, University of Evansville

KIRKWOOD, BARBARA H., Associate Professor in Academic Skills Advancement, Evansville; BA, University of Evansville, MS, University of Southern Indiana

LAMMERS, MARK P., Program Chair, Professor in Automotive Technology, Evansville; AAS, Ivy Tech State College, BS, Eastern Illinois University, MS, Indiana State University

LEWIS, ANN E., Professor in Office Administration, Evansville; AS, Wabash Valley College, BS, MS, Southern Illinois University

LINDSAY, GAIL, Assistant Instructor in Nursing, Evansville; AS, Southeastern Illinois College; BS, Southern Illinois University at Edwardsville

LUTZ, KITTY, Associate Professor in Medical Assisting, Program Chair, Evansville; BS, MS, University of Southern Indiana

MCCUTCHAN, JUDITH A., Professor in Nursing, Division Chair, Evansville; AS, BS, MS, University of Evansville

MCLAUGHLIN, COLLEEN, Instructor in Nursing, Evansville; BSN, University of Evansville

MERLE, DON, Assistant Professor in Manufacturing and Industrial Technology, Evansville; BS, Purdue University; MS, University of Southern Indiana

MEIBALANE, PAMELA, Instructor in Nursing, Evansville; BS, MS, University of Evansville

MOTYCKA, ANN, Professor in Nursing, Evansville; AD, Sinclair Community College; BS, MS, University of Evansville

NIEHAUS, MICHAEL A., Program Chair, Assistant Professor in Electronics and Computer Technology, Evansville; BS, University of Southern Indiana

OATIS, CAROLYN S., Professor in Microbiology, Evansville; BS, St. Louis University, MS, University of Southern Indiana

O'DANIEL, SCOTT, Assistant Professor in Speech and Interpersonal Communication, Evansville; BS, University of Cincinnati; BS, University of Southern Indiana; MA, Ball State University

OFFERMAN, J. STEPHEN, Associate Professor in Business Administration, Evansville; BS, MBA, University of Evansville

PERRY, BILL, Instructor in Pre-Engineering, Program Chair, Evansville; BSME, University of Alabama; MA, Bastyr University

PETTY, MICHAEL E., Division Chair, Professor in General Education , Evansville; BA, Indiana State University, MA, University of Evansville, PhD, Indiana State University

RANGAVAJLA, NAINA, Instructor in Biotechnology, Program Chair, Evansville; BS, University of Madras; MS, University of Poona; PhD, University of Mysore

REED, RICHARD, Instructor in Criminal Justice, Evansville; BS, Indiana State University; MS, University of Evansville

RENDLEMAN, BARBARA, Associate Professor in General Education, Program Chair, Evansville; BS, University of Illinois, MS, University of Wisconsin-Milwaukee

RIES, ANTONINA, Associate Professor in Chemistry, Evansville; BS, MS, St. Petersburg University

ROBB, TRACY, Assistant Professor in Visual Communications, Evansville; BS, University of Southern Indiana, MFA, Savannah College of Arts and Design

SATTERFIELD, MICHAEL A., Program Chair, Assistant Professor in Design Technology, Evansville; BS, Ball State University

SCHENK, LINDA, Assistant Professor in Early Childhood Education, Evansville; BS, Indiana University; MA, University of Evansville

SCHMIDT, ALICE E., Associate Professor in Practical Nursing, Evansville; BS, Evansville College School of Nursing, MS, University of Evansville

SHULL, DONALD, Associate Professor in Psychology, Evansville; MS, University of Evansville; EdD, Indiana University

SILLIMAN, JEANNE C., Professor in Academic Skills Advancement, Evansville; BA, Saint Benedict College, MA, University of Evansville

SWAIN-LeDOUX, CAMILLA, Assistant Professor in Academic Skills Advancement, Evansville; BA, Certificate in Youth Ministry, Taylor University

TICHENOR, JANE, Program Chair, Professor in Academic Skills Advancement,: Evansville; BS, Oakland City University, MS, Indiana University

UHDE, KARLA G., Assistant Professor in Nursing, Evansville; BS, Indiana University, MS, University of Pennsylvania

VOLLMER, TIMOTHY, Instructor in Paramedic Science and Program Chair, Evansville; BA, MA, Southern Illinois University

WARREN, GREGORY A., Assistant Professor in Automotive Technology, Evansville; AA, Parkland College, BA, Southern Illinois University; MS, Southern Illinois University

WEISS, JAN, Associate Professor in Mathematics, Program Chair, Evansville; BS, MS, University of Southern Indiana

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WEST, BRIAN, Division Chair, Assistant Professor in Technology; BS, MS, Rose-Hulman Institute of Technology

WHIPPLE, REBECCA L., Professor in Nursing, Evansville; BS, MS, University of Evansville

WHITE, VICTORIA R., Assistant Professor in Accounting, Evansville; BS, MBA, University of Southern Indiana

WILDER, TAMMY, Associate Professor in Nursing, Evansville; BS, MS, University of Evansville

WILLIAMS, BRUCE, Assistant Instructor in Nursing, Evansville; AS, Vincennes University; BS, MS, Oakland City University

WILTSIE, LISA, Assistant Professor in Academic Skills Advancement, Evansville; MS, Oakland City University

REGION 13

SHOURDS, RITA H., Chancellor; BA, Indiana University; MS, University of Louisville

NOLOT, TERRY, Dean of Enrollment Services; AS, Vincennes University; BS, MS, Indiana State University

TALBERT, MICHAEL, Interim Dean of Academic Affairs; BA, Central Bible College; MDiv, Southern Baptist Theological Seminary

VOIGHT, TODD, Executive Director of Administration; BS, Indiana University; MA, Webster University

FACULTY

ALT, DONNA, Assistant Professor in Practical Nursing, Sellersburg; LPN; BSN, Bellarmine University; MSN, University of Phoenix

BENNETT, DAVID R., Associate Professor in Economics, Sellersburg; BS, MS, Indiana State University; MA, University of Delaware; EdD, University of South Carolina

BOLEY, AMANDA, Instructor in Psychology, Sellersburg; BA, Indiana University Southeast; MA, Ball State University

BROUGHTON, TONYA, Assistant Professor in Associate of Science in Nursing, Sellersburg; LPN, ASN, Ivy Tech State College; BSN, Indiana University Southeast; RN, MSN, Bellarmine University

BUKOWSKI, ELAINE, Assistant Professor in Anatomy and Physiology, Sellersburg; BS, MD, Suny at Buffalo, School of Medicine; JD, University of Louisville

BURTON, PAMELA, Instructor in Medical Assisting, Program Chair, Sellersburg; CMA, Jefferson State Vocational School, CPT, LRT

CLARK, BONNIE L., Instructor in Associate of Science in Nursing, Sellersburg; ASN, Ivy Tech State College; BSN, Indiana University Southeast

CLIFTON, DAVID L., Associate Professor in Business, Division Chair, Sellersburg; BSC, University of Louisville; MBA, University of Kentucky; EdD, Spalding University

CULBERTSON, MELANIE, Assistant Professor in English, Sellersburg; BA, Morehead State University; MA, University of Louisville

EDWARD, DAVID, Instructor in Design Technology, Sellersburg; BS, West Virginia University; MBA, University of Louisville

FITZNER, BEVERLY, Associate Professor in Office Administration, Sellersburg; BS, Indiana University; MS, State University of New York

FREEMAN, BARBARA, Associate Professor in Practical Nursing, Sellersburg; BSN, Midwestern State University; MS, Indiana State University

GIBSON, KELLY, Instructor in Medical Assisting, Sellersburg; AAS, Ivy Tech Community College

GREGORY, MICHAEL, Associate Professor in Anatomy and Physiology, Sellersburg; BS, MS, Eastern Kentucky University; MS, University of Louisville

HOLLAND, LISA, Instructor in Associate of Science Nursing, Sellersburg; BSN, University of Evansville

HORNUNG, BRIAN, Assistant Professor in HVAC, Sellersburg; AAS, Community College of the Air Force; BS, Wayland Baptist; MS, Indiana State University

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KINKLE, MARK ROBERT, Assistant Professor in Respiratory Care, Sellersburg; AHS, University of Louisville; BA, Clemson University

LEWELLEN, LONNIE R., Professor in Design Technology, Division Chair, Sellersburg; AAS, Louisville Technical Institute; BA, Louisville Bible College; MA, Cincinnati Bible College; MS, Indiana State University

LEWIS, KRISTY, Instructor in Medical Assisting, Sellersburg; TC, Ivy Tech State College; CPC and CCP, PHIA

LYNCH, REBEKAH, Assistant Professor in Business, Sellersburg; BA, Tabor College; MSA, Central Michigan University

MCCORMICK, MAURICE D., Associate Professor in Human Services, Program Chair, Sellersburg; BS, University of Louisville; MEd, Spalding University; CPC EdD, Heed University; LMHC

MCKAY, TERESA, Assistant Professor in Early Childhood Education, Program Chair, Sellersburg; BS, Indiana University; MA, Concordia University

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MORGANTI, SUSAN, Instructor in School of Arts and Design, Sellersburg; BA, University of Louisville

NEWBY, PATSY K., Assistant Professor in Communication, Sellersburg; BA, Lindsey Wilson College; MA, Western Kentucky University

NOE, KEITH, Professor in Electronics and Computer Technology, Program Chair, Sellersburg; AS, Cincinnati Technical College; BS, University of Cincinnati; MS, Indiana University Southeast

PATUS, JIM W., Assistant Professor in Biology, Sellersburg; BA, Indiana University

PHULPAGAR, STANLEY, Instructor in General Education, Sellersburg; BS, Bhayan's College; MS, Central Michigan University

PICKERILL, KEN, Instructor in Automotive Technology, Sellersburg; BS, Indiana State University

QUINLAN, TERRANCE, Professor in Manufacturing and Industrial Technology, Department Chair, Sellersburg; AAS, Kentucky College of Technology; BA, Morehead State University; MS, Indiana State University

RANDELIA, GOOL, Professor in General Education, Program Chair, Sellersburg; BA, MA, University of Bombay; MLS, Indiana University; MS, Indiana University Southeast

RAWLES, DEBORAH, Associate Professor in Medical Assisting, Sellersburg; AS, Mount Ida Junior College; BA, Purdue University; PA, University of Kentucky

ROBERTS, A. JACK., Associate Professor in Mathematics, Program Chair, Sellersburg; BS, Austin Peay University; MS, Indiana University Southeast

ROBINSON, APRIL, Assistant Professor in Mathematics, Sellersburg; BS, Eastern Kentucky University; MS, Indiana University

ROEDERER, LINDA, Assistant Professor in Mathematics, Sellersburg; BS, MS, Indiana University

SCOTT, JERRY, Assistant Professor in Accounting, Sellersburg; BS, Indiana University Southeast; MA, Webster University

SCOTT, OPHELIA, Instructor in Education, Sellersburg; BS, MEd, University of Louisville

SOBOLEWSKI, ELISE A., Director of Respiratory Clinical Education, Sellersburg; AS, BS, University of Louisville

SPECK, MELISSA, Instructor in Business, Sellersburg; BS, MBA, Indiana University

SPETH, KIMBERLY, Instructor in Associate of Science in Nursing, Sellersburg; BSN, RN, Indiana University

SPRIGLER, GAIL, Professor in Associate of Science in Nursing, Division Chair, Sellersburg; LPN, New Albany School of Nursing; BSN, Indiana University Southeast; MSN, Bellarmine University

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STOCKDELL, ELIZABETH, Assistant Professor in Associate of Science in Nursing, Sellersburg; BSN, MA, Spalding University

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TALBERT, MICHAEL, Associate Professor in Academic Skills Advancement, Division Chair, Sellersburg; BA, Central Bible College; MDiv, Southern Baptist Theological Seminary

VON KANEL, ROBERT, Professor in Associate of Science in Nursing, Program Chair, Sellersburg AAS, Indiana University Southeast; BSN, Spalding College; MSN, Bellarmine University

WILLIAMSON, ROBERT, Assistant Professor in Computer Information Systems, Sellersburg; BA, Texas Western College; MS, Eastern Kentucky University

WRIGHT, DIAN, Assistant Professor in Associate of Science Nursing, Sellersburg; AS, Hiwassee College; BS, US Army School of Allied Health; MBA, Indiana Wesleyan University

YORK, ROBERT L., Associate Professor in English, Sellersburg; BS, MA, Southern Illinois University

REGION 14

WHIKEHART, JOHN, Chancellor; BS, Indiana University; MA, Ball State University

FROST, NANCY, Assistant Dean of Academic Affairs; BS, MS, MBA, Indiana University

JACOBS, DIANA, Dean of Student Affairs; BS, MEd, State University of New York

NEWTON, BRYAN, Dean of Enrollment Services; BA, Southern Illinois University; JD, The Ohio State University

SMITH, JAMES O., Dean of Academic Affairs; BS, Ball State University; MBA, University of Illinois; PhD, Indiana State University

FACULTY

ARNOLD, LINDA C., Associate Professor in Nursing, Program Chair, Bloomington; MSN, University of Southern Indiana

ARNOLD, STEVE, Assistant Professor in Biotechnology, Bloomington; MS, Purdue University

BARE, BRUCE, Assistant Professor in Paramedic Science, Program Chair, Bloomington; BA, Purdue University

BARNES, KIRK, Professor in Design Technology, Division Chair, Bloomington; BS, MA, Ball State University

CRAIG, KATHLEEN, Assistant Professor in Health Information Technology, Program Chair, Bloomington; BS, Indiana University

DAWSON, RONALD A., Professor in General Education, Bloomington; BS, University of Illinois; MA, Eastern Illinois University

DIX, JEANETTE, Assistant Professor in Computer Information Systems, Computer Information Technology, Office Administration, Bloomington; BS, Indiana University

ELKES, ROY, Assistant Professor in Accounting, Bloomington; BA, MA, Indiana University

ENGLERT, STEVEN A., Instructor in Accounting, Program Chair, Bloomington; BS, Indiana University

ESCH-WILLIAMS, MARK, Instructor in Manufacturing and Industrial Technology, Bloomington; BS, Indiana State University

FARRIS, JUSTIN, Instructor in Respiratory Therapy, Bloomington; BS, Indiana University-Purdue University Indianapolis

GOODWIN, SHEILA, Associate Professor in Nursing, Bloomington; BS, BSN, Purdue University; MS, ABD, Indiana University

GRAY, ANNIE M., Associate Professor in General Education, English, Program Chair, Bloomington; BA, Goshen College; MA, Indiana University

HALL, DONN, Associate Professor in General Education, History, Art History, Economics, Music, Political Science, Geography, Program Chair, Bloomington; BA, MA, Indiana University

HASLER, GLORIA, Assistant Professor in Academic Skills Advancement, Life Skills, Program Chair, Bloomington; BS, Indiana University; MS, Butler University

HEINZEN, JIM, Assistant Professor in Business and Office Administration, Department Chair, Bloomington; BS, University of Illinois; MS, Indiana University

HESSERT, PAUL A., Associate Professor in General Education, Math, Bloomington; BS, MA, Indiana University

HOLTSCLAW, DIANNA, Assistant Professor in Practical Nursing, Bloomington; MSN, University of Southern Indiana

JILLOT-ELICK, KAREN, Assistant Professor in Nursing, Bloomington; MSN, University of Southern Indiana

KLEIN, KEITH, Assistant Instructor, Program Chair, Communication, Bloomington; BS, Indiana University

KORNYA, PETER S., Associate Professor in General Education, Bloomington; BSc, University of British Columbia; MA, University of Oregon

LEACH, CELINDA K., Professor in Practical Nursing, Division Chair, Bloomington; BS, MPH, Indiana University; Nursing Diploma, University of Tennessee

LEE, SENGYONG, Associate Professor of Biotechnology, Program Chair, Bloomington; PhD, Miami University

LONG, JENNIFER, Instructor in Nursing, Bloomington; BSN, MSN, Indiana University

MAITLAND, ANGELA, Assistant Professor in Criminal Justice and Paralegal Studies, Department Chair, Bloomington; MS, Central Missouri State University

MALOY, LORI, Assistant Instructor in Associate of Science Nursing, Bloomington; BSN, Indiana University-Purdue University Indianapolis

MARKHAM, BENJAMIN, Assistant Professor in General Education, Math/Science Program Chair, Bloomington; BS, Western Kentucky University; MS, Indiana University

MELTON, NONA L., Associate Professor in Practical Nursing, Bloomington; BS, University of Evansville; MSN, University of Southern Indiana

MILLEN, TOM, Instructor in Electronics and Computer Technology, Bloomington; BSEE, University of Arkansas

MOORE, CAROLYN, Instructor in Respiratory Therapy, Program Chair, Bloomington; BS, Indiana University-Purdue University Indianapolis

MURPHY, REBECCA, Assistant Instructor, Associate of Science in Nursing, Bloomington; BSN, Indiana University

NELSON, PEGGY L., Professor in Academic Skills Advancement, Division Chair, Bloomington; BS, MS, Indiana University

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OVERTON, BONITA S., Instructor in General Education, Bloomington; BS, University of Southern Indiana

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READING, THOMAS C., Associate Professor in Business Administration, Bloomington; BS. Indiana University; MBA, Harvard University

REINHARDT, MONTRA, Assistant Instructor in Practical Nursing, Bloomington; BSN, University of Evansville

RISEN, MARJIE B., Assistant Professor in Early Childhood Education, Program Chair, Bloomington; BS, MS, Indiana University

RODRIGUEZ, OSCAR, Assistant Professor in Electronics and Computer Technology, Bloomington; BSE, Trinity College & University; BSECT Indiana State University

ROY, LEAH, Assistant Instructor in Practical Nursing, Bloomington; BSN, Case Western Reserve

RUCKER, JOHN, Assistant Professor in Criminal Justice and Paralegal Studies, Bloomington; JD, Louisiana State University

SIMMONS, CAROL A., Associate Professor in Academic Skills Advancement, English, Program Chair, Bloomington; BA, James Madison University; MA, Indiana University

SOTO, ROBERT, Associate Professor in General Education, Sociology, Philosophy, Spanish, Program Chair, Bloomington; BS, MA, Texas Tech University

STARR, ELIZABETH, Assistant Professor in General Education, English; BA, MA, University of Minnesota; MA, Indiana University

STRAIN, LARRY G., Associate Professor in Computer Information Systems, Bloomington; BS, Indiana University

SWAFFORD, LARRY G., Professor in Radiation Therapy, Program Chair, Bloomington; BS, University of Oklahoma; MEd, PhD, Virginia Commonwealth University

THOMPSON, PAM, Associate Professor in Practical Nursing, Bloomington; BSN, Morningside College; MSN, University of Southern Indiana

WOLFGER, MARTIN, Assistant Professor in General Education, Psychology, Program Chair, Bloomington; MS, Karl-Franzens University, MA, Ball State University

WORDEN, WILLIAM P., Assistant Professor in Computer Information Systems, Bloomington; BS, MS, Ball State University

WRIGHT, KENTON, Assistant Professor in Design Technology, Bloomington; BS, Purdue University

YOUNG, DONNA K., Associate Professor in Office Administration, Bloomington; BS, MS, Indiana University

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IVY TECH
COMMUNITY
COLLEGE

ACCREDITATIONS AND MEMBERSHIPS

IVY TECH
COMMUNITY COLLEGE

Ivy Tech Community College is accredited by The Higher Learning Commission and is a member of The North Central Association. Other accrediting agencies and affiliates are listed below by regions. The college is a member of the American Association of Collegiate Registrars and Admissions Officers, the American Association of Community Colleges, the Association of Community College Trustees, CAUSE, the National Association of College and University Business Officers, the National Association of Colleges and Employers, the National Association of Financial Aid Administrators, the National Council for Research and Planning, the National Council on Student Development, and the Society for College and University Planning.

REGION 1 (GARY, EAST CHICAGO, MICHIGAN CITY, VALPARAISO)

AGENCY	PROGRAM AREA
American Culinary Federation Educational Institute	Hospitality Administration
American Board of Funeral Services Education	Mortuary Science
Commission on Accreditation of Allied Health Education Programs:	
American Association of Medical Assistants' Endowment	Medical Assistant
Committee on Accreditation for Respiratory Care	Respiratory Care
Accreditation Review Committee on Education in Surgical Technology	Surgical Technology
National League for Nursing Accrediting Commission	Practical Nursing, Associate of Science in Nursing Indiana State Board of Nursing Associate of Science in Nursing Practical Nursing
Commission on Accreditation of Allied Health Education Programs	Paramedic Science
Commission on Accreditation in Physical Therapy Education	Physical Therapist Assistant
American Physical Therapy Association	Physical Therapist Assistant
Association of Collegiate Business Schools and Programs	Accounting Business Administration Computer Information Systems Office Administration

REGION 2 (SOUTH BEND, ELKHART, WARSAW)

AGENCY	PROGRAM AREA
Commission on Accreditation of Allied Health Education Programs:	
American Association of Medical Assistants' Endowment	Medical Assistant
National Accrediting Agency for Clinical Laboratory Sciences	Medical Laboratory Technician Phlebotomy
Indiana State Board of Health	Nurse Aide
	Qualified Medication Aide

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Indiana State Board of Nursing	Associate of Science in Nursing Practical Nursing
Association of Collegiate Business Schools and Programs	Accounting Business Administration Computer Information Systems Office Administration
National Association of Industrial Technology	Technology Division Automotive Service Technology Design Technology Electronics and Computer Technology Manufacturing and Industrial Technology
American Culinary Federation Educational Institute	Hospitality Administration
HVAC Excellence	Manufacturing and Industrial Technology
National League for Nursing Accrediting Commission	Associate of Science in Nursing
Indiana Department of Homeland Security	Emergency Medical Technician, Ambulance
National Institute for Automotive Service Excellence/ National Automotive Technicians' Education Foundation, Master Certification	Automotive Technology

REGION 3 (FORT WAYNE)

AGENCY	PROGRAM AREA
American Association for Medical Transcription	Medical Assisting
Commission on Accreditation of Allied Health Education Programs:	
American Association for Paralegal	Paralegal Studies
American Association of Medical Assistants' Endowment	Medical Assisting
Committee on Accreditation for Respiratory Care	Respiratory Care
American Welding Society	Welding Specialty
Association of Collegiate Business Schools and Programs	Accounting Business Administration Computer Information Systems Office Administration
Dietary Managers Association	Dietary Manager
Indiana State Board of Nursing	Practical Nursing Associate of Science in Nursing
National League for Nursing	Practical Nursing Associate of Science in Nursing
National Automotive Technicians' Education Foundation, Inc.	Automotive Technology
National Association of Industrial Technology	Construction Design

Agency	Program Area
	Industrial Automotive Service
	Manufacturing and Industrial Technology
	Industrial Technology Specialties
Commission for Hotel, Restaurant and Institutional Education	Hospitality Administration
American Culinary Federation Educational Institute	Hospitality Administration
Council for Standards in Human Services Education	Human Services
Commission on Massage Therapy Accreditation	Therapeutic Massage
Indiana State Board of Health	Certified Nursing Assistant Qualified Medication Aide

REGION 4 (LAFAYETTE)

AGENCY	PROGRAM AREA
Indiana State Board of Nursing	Associate of Science in Nursing Practical Nursing
Indiana State Board of Health	Qualified Medication Aide
National League for Nursing Accrediting Commission	Associate of Science in Nursing Practical Nursing
American Dental Association, Commission on Dental Accreditation	Dental Assistant
Commission on Accreditation of Allied Health Education Programs:	
American Association of Medical Assistants' Endowment	Medical Assistant
Accrediting Review Committee on Education in Surgical Technology	Surgical Technology
Committee on Accreditation for Respiratory Care	Respiratory Care
Association of Collegiate Business Schools and Programs	Accounting Business Administration Computer Information Systems Office Administration
National Institute for Automotive Service Excellence/ National Automotive Technicians' Education Foundation	Automotive Technology
National Association of Industrial Technology	Automotive Technology Design Technology Manufacturing and Industrial Technology

REGION 5 (KOKOMO, LOGANSPORT)

AGENCY	PROGRAM AREA
American Dental Association Committee on Dental Accreditation	Dental Assistant
Association for Collegiate Business Schools and Programs	Accounting Business Administration Computer Information Systems Office Administration
Commission on Accreditation of Allied Health Education Programs	
Accrediting Review Committee on Education in Surgical Technology	Surgical Technology
American Association of Medical Assistants' Endowment	Medical Assistant
Council for Standards in Human Services Education	Human Services
HVAC Excellence	Construction Technology - HVAC Specialty
Indiana State Department of Health	Certified Nurse Assistant
Indiana State Board of Nursing	Practical Nursing Associate of Science in Nursing
Indiana Department of Homeland Security	Paramedic Science
National League for Nursing Accrediting Committee	Associate of Science in Nursing Practical Nursing
National Association of Industrial Technology	Technology Division Programs
National Institute for Automotive Service Excellence/ National Automotive Technicians' Education Foundation	Automotive Technology

REGION 6 (ANDERSON, MARION, MUNCIE)

AGENCY	PROGRAM AREA
Association for Collegiate Business Schools and Programs	Accounting Business Administration Computer Information Systems Office Administration
Association for Gerontology in Higher Education	Human Services
Accreditation Review Committee on Education in Surgical Technology	Surgical Technology
National Association of Industrial Technology	Industrial Technology
Council for Standards in Human Services Education	Human Services
American Physical Therapy Association	Physical Therapy Assistant
Joint Review Committee on Education in Radiologic Technology	Radiologic Technology
Indiana Department of Homeland Security	Emergency Medical Technician Ambulance/Advance
Indiana State Board of Health	Nurse Aide Qualified Medication Aide
Indiana State Board of Nursing	Practical Nursing
Commission on Accreditation of Allied Health Education Programs:	
American Association of Medical Assistants' Endowment	Medical Assistant
Commission on Accreditation in Physical Therapy Education	Physical Therapist Assistant
National Institute for Automotive Service Excellence/ National Automotive Technicians' Education Foundation	Automotive Technology
National Organization for Human Services	Human Services

REGION 7 (TERRE HAUTE)

AGENCY	PROGRAM AREA
Association for Collegiate Business Schools and Programs	Accounting Business Administration Computer Information Systems Office Administration
Federal Aviation Administration	Aviation Technology
Indiana State Board of Health	Nurse Aide Social Services/Long-Term Care Activity Director/Long-Term Care Qualified Medication Aide
Indiana Department of Homeland Security	Emergency Medical Technician
Indiana State Board of Nursing	Practical Nursing Nursing
National League for Nursing	Associate of Science in Nursing
Council for Standards in Human Services Education	Human Services
National Association of Alcohol and Drug Abuse Counselors	Human Services
Commission on Accreditation of Allied Health Education Programs:	
American Association of Medical Assistants' Endowment	Medical Assistant Surgical Technology Respiratory Care
National Accrediting Agency for Clinical Laboratory Sciences	Medical Laboratory Technician
Joint Review Committee on Education in Radiologic Technology	Radiologic Technology
National Association of Industrial Technology	Automotive Technology Manufacturing and Industrial Technology Design Technology Electronics Technology
National Institute for Automotive Service Excellence/ National Automotive Technicians' Education Foundation	Automotive Technology
Committee on Accreditation for Respiratory Care	Respiratory Care
Joint Review Committee for Respiratory Therapy Education	Respiratory Care

REGION 8 (INDIANAPOLIS)

AGENCY	PROGRAM AREA
The American Culinary Federation Educational Institute	Hospitality Administration; Culinary Arts
International Association of Administrative Professionals	Office Administration
Commission on Accreditation of Allied Health Education Programs:	
American Association of Medical Assistants' Endowment	Medical Assisting

Accreditation Review Committee on Education in Surgical Technology	Surgical Technology
Joint Review Committee on Education in Radiologic Technology	Radiologic Technology
Association for Collegiate Business Schools and Programs	Accounting Business Administration Computer Information Systems Office Administration
Council for Standards in Human Services Education	Human Services
National Association of Industrial Technology	Manufacturing and Industrial Technology Design Technology Electronics Technology Machine Tool Technology
National Institute for Automotive Service Excellence/ National Automotive Technicians' Education Foundation	Automotive Technology
National League for Nursing Accrediting Commission	Associate of Science in Nursing Practical Nursing
Indiana State Board of Nursing	Associate of Science in Nursing Practical Nursing
Indiana State Board of Health	Certified Nurse Aide Qualified Medication Aide
Council on Hotel/Restaurant and Institutional Education	Hospitality Administration
Commission on Accreditation of Hospitality Management	Hospitality Administration

REGION 9 (RICHMOND)

AGENCY	PROGRAM AREA
Indiana State Board of Nursing	Associate of Science in Nursing Practical Nursing
National League for Nursing Accrediting Commission	Associate of Science in Nursing Practical Nursing
Indiana State Board of Health	Nurse Aide
Commission on Accreditation of Allied Health Education Programs:	
American Association of Medical Assistants' Endowment	Medical Assisting
Indiana Department of Homeland Security	Basic Emergency Medical Technician Advanced EMT
Association for Collegiate Business Schools and Programs	Accounting Business Administration Computer Information Systems Office Administration
National Association of Industrial Technology	Automotive Technology Construction Technology Manufacturing and Industrial Technology

| National Automotive Technicians Education Foundation | Automotive Technology |

REGION 10 (COLUMBUS)

AGENCY	PROGRAM AREA
Indiana State Board of Nursing	Practical Nursing
Association for Collegiate Business Schools and Programs	Accounting Business Administration Computer Information Systems Office Administration
Commission on Accreditation of Allied Health Education Programs:	
American Association of Medical Assistants' Endowment	Medical Assistant Paramedic Science
Indiana State Board of Health	Certified Nursing Assistant
Association for Continuing Education and Training	Corporate and Continuing Education Services
Association of Surgical Technologists	Surgical Technology
National League of Nursing	Nursing

REGION 11 (LAWRENCEBURG, MADISON)

AGENCY	PROGRAM AREA
Indiana State Board of Nursing	Associate of Science in Nursing Practical Nursing
National League of Nursing	Practical Nursing
Commission on Accreditation of Allied Health Education Programs:	
American Association of Medical Assistants' Endowment	Medical Assistant
Indiana Department of Homeland Security	Emergency Medical Technician, Basic and Advanced
Association of Collegiate Business Schools and Programs	Accounting Business Administration Computer Information Systems Office Administration

REGION 12 (EVANSVILLE)

AGENCY	PROGRAM AREA
Commission on Accreditation of Allied Health Education Programs:	
American Association of Medical Assistants' Endowment	Medical Assistant
Accreditation Review Committee on Education in Surgical Technology	Surgical Technology
Association for Collegiate Business Schools and Programs	Accounting Business Administration Computer Information Systems Office Administration

| National Institute for Automotive Service Excellence/ National Automotive Technicians' Education Foundation	Automotive Technology
National Association of Industrial Technology	Electronics Technology Design Technology Manufacturing Technology
Indiana State Board of Nursing	Associate of Science in Nursing Practical Nursing
National League for Nursing Accrediting Commission	Associate of Science in Nursing Practical Nursing
Committee on Accreditation of Education Programs for the EMS Professional	Paramedic Science

REGION 13 (SELLERSBURG)

AGENCY	PROGRAM AREA
National Association of Schools of Art and Design	Visual Communication
Council for Students in Human Services Education	Human Services
Indiana State Board of Nursing	Associate of Science in Nursing Practical Nursing
Indiana State Board of Health	Nurse Aide Qualified Medication Aide
Indiana Department of Homeland Security	Emergency Medical Technician, Ambulance
National Institute for Automotive Service Excellence/ National Automotive Technicians' Education Foundation	Automotive Technology
Commission on Accreditation of Allied Health Education Programs:	
American Association of Medical Assistants' Endowment	Medical Assistant
Association for Collegiate Business Schools and Programs	Accounting Business Administration Computer Information Systems Office Administration
National Association of Industrial Technology	Design Technology Electronics Technology Manufacturing & Industrial Technology

REGION 14 (BLOOMINGTON)

AGENCY	PROGRAM AREA
Indiana State Board of Nursing	Associate of Science in Nursing Practical Nursing
National League for Nursing Accrediting Commission	Practical Nursing Associate of Science in Nursing

Indiana State Department of Health	Nurse Aide
Indiana Department of Homeland Security	Emergency Medical Technician – Basic Paramedic
Association for Collegiate Business Schools and Programs	Accounting Business Administration Computer Information Systems Office Administration
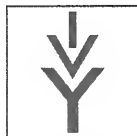
Contact Information for Accrediting Organizations

Accreditation Review Committee on Education in Surgical Technology
6 W. Dry Creek Circle, Suite 210
Littleton, CO 80120 (303) 694-9262

American Association of Medical Assistants' Endowment
20 North Wacker Drive, Suite 1575
Chicago, IL 60606 (312) 899-1500

American Association for Medical Transcription
4230 Kiernan Avenue
Modesto, CA 95354-0550 (800) 982-2182

American Association for Paralegal
19 Mantua Road
Mt. Royal, NJ 08061 (800) 423-2829

American Board of Funeral Services Education
3432 Asland Ave., Suite U
St. Joseph, MO, 64506 (816) 233-3747

American Culinary Federation Educational Institute
1800 Center Place Way
Saint Augustine, FL 32095 (800) 624-9458

American Dental Association, Commission on Dental Accreditation
211 East Chicago Avenue
Chicago IL 60611-2678 (312) 440-2940

American Physical Therapy Association
1111 North Fairfax Street
Alexandria, VA 22314-1488 (703) 684-2782

American Welding Society
550 N.W. LeJune Road
Miami, FL 33126 (800) 443-9353

Association of Collegiate Business Schools and Programs
7007 College Boulevard, Suite 420
Overland Park, KS 66211 (913) 339-9356

Association for Gerontology in Higher Education
1030 15th Street, NW, Suite 240
Washington, DC 20005 (202) 289-9806

Association of Surgical Technologists
6 W. Dry Creek Circle
Littleton, CO 80120 (303) 694-9130

Commission for Hotel Restaurant Institutional Education
2613 N. Parham Rd.
Richmond, VA 23294 (804) 346-4800

Commission on Accreditation in Physical Therapy Education
1111 N. Fairfax Street
Alexandria, VA 22314-1488
(703) 684-2782

Commission on Accreditation of Allied Health Education Programs
1361 Park Street
Clearwater, FL 33756 (727) 210-2350

Commission on Accreditation of Hospitality Management
P. O. Box 400
Oxford, MD 21654 (410) 226-5527

Commission on Massage Therapy Accreditation
1007 Church Street, Suite 302
Evanston, IL 60201 (847) 869-5039

Committee on Accreditation of Education Programs for the EMS Professional
1248 Harwood Road
Bedford, TX 76021 (817) 283-9403

Committee on Accreditation for Respiratory Care
1248 Harwood Road
Bedford, TX 76021-4244 (817) 283-2835

Council for Standards in Human Services Education
Attn: Susan Kincaid; PMB 703
1050 Larrabee Avenue, Suite 104
Bellingham, WA 98225-7367

Federal Aviation Administration, Airman Certification Branch
P.O. Box 25082
Oklahoma City, OK 73125-0082

Higher Learning Commission of the North Central Association
30 North La Salle Street, Suite 2400
Chicago, IL 60602-2504 (312) 263-0456

HVAC Excellence
P.O. Box 491
Mount Prospect, IL 60005-0491 (800) 394-5268

Indiana State Board of Health
Two North Meridian Street
Indianapolis, IN 46204 (317) 233-1325

Indiana State Board of Nursing, Health Professions Bureau
402 West Washington Street, Room 066
Indianapolis, IN 46204 (317) 234-2043

Indiana Department of Homeland Security
302 West Washington Street, Room E-208
Indianapolis, IN 46204 (317) 233-6545

International Association for Continuing Education and Training
8405 Greensboro Dr., Suite 800
McLean, VA 22102 (703) 506-3275

International Association of Administrative Professionals
10502 NW Ambassador Drive; P.O. Box 20404
Kansas City, MO 64195-0404 (816) 891-6600

International Council on Hotel, Restaurant & Institutional Education
2810 N. Parham Road, Suite 230
Richmond, VA 22314-1488 (703) 346-4800

Joint Review Committee for Educational Programs for EMT-Paramedic
7108-C South Alton Way, Suite 150
Englewood, CO 80112

Joint Review Committee on Education in Radiologic Technology
20 N. Wacker Drive, Suite 2850
Chicago, IL 60606-3182 (312) 704-5300

National Accrediting Agency for Clinical Laboratory Sciences
8410 West Bryn Mawr Avenue, Suite 670
Chicago, IL 60631 (773) 714-8880

National Association of Alcohol and Drug Abuse Counselors
901 N. Washington St. Suite 600
Alexandria, VA 22314 (800) 548-0497

National Association of Industrial Technology
3300 Washtenaw Avenue, Suite 220
Ann Arbor, MI 48104-4200 (734) 677-0720

National League for Nursing Accrediting Commission
61 Broadway, 33rd Floor
New York, NY 10006 (212) 363-5555

National Institute for Automotive Service Excellence/ National Automotive Technicians' Education Foundation
101 Blue Seal Drive, Suite 101
Leesburg, VA 20175 (703) 669-6650

National Organization for Human Services Education
90 Madison Street, Suite 206
Denver, CO 80206
(303) 320-5430

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